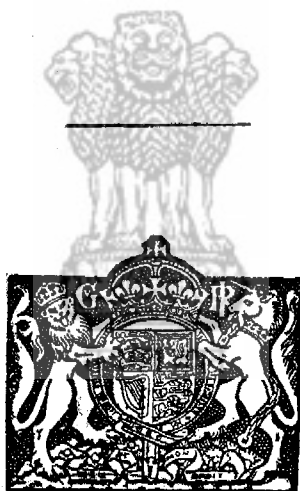


INDIAN TARIFF BOARD

Match Industry

Volume IV

**Views of the Local Governments and
Miscellaneous Written and Oral Evidence
given before the Indian Tariff Board.**



CALCUTTA: GOVERNMENT OF INDIA
CENTRAL PUBLICATION BRANCH
1929

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TABLE OF CONTENTS.

	PAGE.
I.—Government of India, Department of Commerce, Resolution No. 235-T. (14), dated the 2nd October, 1926	1
II.—Press Communiqué issued by the Tariff Board on the 29th November, 1926	3
III.—Letter dated 7th January, 1927, from the Tariff Board to all local Governments asking for information about the manufacture of matches in India	4
IV.—Replies to the above letter received from—	
(1) Government of Burma—	
Letter dated 7th February, 1927	6
(2) Government of Madras—	
(i) Letter dated 17th February, 1927	15
(ii) Letter dated 7th May, 1927	22
(3) Government of the Central Provinces—	
(i) Letter dated 19th February, 1927	27
(ii) Letter dated 9th March, 1927	30
(4) Government of Bihar and Orissa—	
Letter dated 21st February, 1927	31
(5) Government of Bengal—	
Letter dated 23rd February, 1927	36
(6) Government of the Punjab—	
Letter dated 24th February, 1927	47
(7) Government of Assam—	
Letter dated 25th February, 1927	57
(8) Government of Bombay—	
Letter dated 25th February, 1927	59
(9) Government of the United Provinces—	
Letter dated 26th February, 1927	69
V.—Forest Department, Burma—	
A.—WRITTEN.	
(1) Unofficial note, dated the 28th February, 1927, regarding matchwood statistics for Insein Division	75
(2) Letter dated 21st March, 1927, regarding financial forecasts of planting for purposes of supplying wood to the Match Industry	79
(3) Letter dated 24th March, 1927, regarding Matchwoods	82
B.—ORAL.	
(1) Evidence recorded on the 26th March, 1927—	
Introductory—Forest Research—Area of forests in Burma—Plantations—Available supplies of matchwood trees—Estimate of plantation costs—Rates of growth—Planting methods—Replies to the Questionnaire—Sites for Factories—Foreign capital—Method of selling timber from Government forests—Plantation by the Forest Department—Enumeration	84

	Page.
V.—Forest Department, Burma— <i>contd.</i>	
B.—ORAL— <i>contd.</i>	
(2) Note on working plans by Mr. H. R. Blanford, Conservator of Forests, Working Plans Circle	111
(3) Evidence recorded on 28th March, 1927— Introductory—Extraction costs	120
(4) Evidence recorded on the 29th March, 1927— Introductory—Adamjee Hajee Dawood's reserves— Quantity of match timbers—Sites for plantations— Transportation—Conditions of growth of matchwood trees—Return on plantations—Labour required for plantations—Estimate of supply of matchwood trees —The selling of matchwood—Extraction—Foreign interests in factories	124
VI.—Forest Department, Assam—	
Oral evidence of the Conservator of Forests recorded on the 24th June, 1927—	
Introductory—Note on matchwoods—Matchwood with- in reach of the Assam Match Company—Plantations —Location of the factory—Extraction of timber— Storage of match timber—The Assam Match Com- pany's lease—Departmental working of the forests— Lease conditions—Transport to Calcutta—Plantation of Bombax—Concessions to persons of foreign nationality—Total supply of available matchwood	145
VII.—Forest Department, Bombay—	
A.—WRITTEN.	
(i) Letter dated 6th September, 1927, from the Tariff Board to the Chief Conservator of Forests asking for certain information regarding sales of match timbers	158
(ii) Letter dated 28th September, 1927, in reply to the above letter	<i>ib.</i>
(iii) Letter dated 20th December, 1927, forwarding a list of matchwoods extracted from the Bombay Forests	159
B.—ORAL.	
Evidence recorded on 12th December, 1927—	
Introductory—Research work—Sale of standing trees by auction—Plantations	161
VIII.—Forest Department, Bengal—	
(1) Letter dated 17th October, 1927, from the Tariff Board to the Conservator of Forests, Bengal, asking for infor- mation about the availability of matchwood in the vicinity of Calcutta	178
(2) Letter dated 2nd November, 1927, in reply to the above letter	<i>ib.</i>
IX.—Forest Department, Bihar and Orissa—	
Oral evidence of the Conservator of Forests recorded on 15th February, 1928—	
Introductory—Wood supply—Plantations—Conditions in Australia—Mr. Troup's Enquiry	179

X.—Chief Forest Officer, Andaman Islands—

PAGE

A.—WRITTEN.

- (1) Letter added 9th April, 1927, from the Tariff Board to the Chief Forest Officer, Andaman Islands, asking for information regarding supply of matchwood 188
- (2) Letter dated 17th May, 1927, in reply to the above letter 189

B.—ORAL.

Evidence recorded on 14th February, 1928—

Introductory—Difficulties of Extraction—Cost of Extraction—Freight charges—Match Factory in the Andamans—Log measurements 191

XI.—Forest Research Institute, Dehra Dun—

A.—WRITTEN.

- (1) Letter dated 18th January, 1927, forwarding a note by the Forest Economist on Match Industry 204
- (2) Letter dated 11th April, 1927, forwarding a note embodying information collected by the Forest Research Institute about Indian wood 205
- (3) Letter dated 14th January, 1928, about making India self-supporting in the matter of matchwood 209
- (4) Letter dated 18th January, 1928, forwarding a copy of Forest Economist's note dated 16th January, 1928 211
- (5) Letter dated 25th January, 1928, forwarding copy of report from the Deputy Conservator of Forests, North Kheri Division 212

B.—ORAL.

Evidence recorded on the 21st January, 1928—

Introductory—Research—Plantations—Storage of Wood—Qualities of a good match—Composition 214

XII.—Collector of Customs, Rangoon—

A.—WRITTEN.

- (1) Note handed in on the 30th March, 1927 237
- (2) Letter dated 16th April, 1927, forwarding correspondence regarding alleged smuggling of matches from China *ib.*
- (3) Letter dated 26th April, 1927, forwarding further correspondence on the above subject 238

B.—ORAL.

Evidence recorded on 30th March, 1927—

Introductory—Method of levying the import duty on matches—Levying an excise duty—The prevention of smuggling 241

XIII.—Collector of Customs, Bombay—

A.—WRITTEN.

- (1) Letter dated 7th December, 1927, forwarding notes about matches 253
- (2) Letter dated 13th December, 1927, forwarding statement showing matches imported into Bombay 262

	PAGE.
XIII.—Collector of Customs, Bombay— <i>contd.</i>	
B.—ORAL.	
Evidence recorded on the 14th December, 1927—	
Introductory—Seaborne Trade Returns—c.i.f. price of imported matches—Assessment of <i>ad valorem</i> duty—Goods in bond—Import of excisable articles—Use of revenue labels—Risk of forgery—Import from Indian States—Detection of forged labels	268
XIV.—Collector of Customs, Karachi—	
Letter without date forwarding statements of matches re-exported and transhipped at Karachi to Indian States and Indian ports, not British	284
XV.—Collector of Customs, Calcutta—	
Letter dated 11th February, 1928, giving c.i.f. prices of foreign matches	286
XVI.—Excise Department, Burma—	
A.—WRITTEN.	
Letter dated 22nd April, 1927, forwarding a note on the collection of excise duty on matches	287
B.—ORAL.	
Evidence recorded on the 28th March, 1927—	
Introductory—Salt Excise and Duty—Application of an excise duty to the manufacture of matches—The stamped label system—Local excise	290
XVII.—Excise Department, Bombay	
Oral evidence of the Commissioner of Excise, Bombay, recorded on the 13th December, 1927—	
Introductory—Work of the Excise Department—Arrangements with Indian States—Toddy—Foreign liquor—Opium—Cotton Excise Duty—Match manufacture unsuitable as a cottage industry—Government revenue	302
XVIII.—Collector of Salt Revenue, Bombay—	
Oral evidence recorded on the 13th December, 1927—	
Introductory—Manufacture of salt—The Customs barrier—Manufactures of Indian States—Revenue labels on match boxes	331
XIX.—Director of Industries, Bengal—	
A.—WRITTEN.	
(1) Letter dated 15th October, 1927, forwarding a note by Mr. S. C. Mitter on Match Industry organized on cottage lines	340
(2) Letter dated 13th February, 1928, from Mr. S. C. Mitter, forwarding further note on the above subject	351
B.—ORAL.	
Evidence recorded on the 15th February, 1928—	
Introductory—Mr. Mitter's views—Mr. Weston's views—Cottage Industries—Mr. Ghose's opinion—A Government factory—Differential excise duty	358

XX.—Director General of Commercial Intelligence— Page.

Letter dated 23rd December, 1927, forwarding a statement of imports of matches into non-British ports in India 373

XXI.—Views of Chambers of Commerce, Associations, etc.—

1. Indian Match Manufacturers' Association, Calcutta—

A.—WRITTEN.

(i) Letter dated 16th October, 1926 381
(ii) Letter dated 22nd June, 1927 384

B.—ORAL.

Evidence recorded on the 18th October, 1927—

Introductory—Wood supply—Supplies from the Andamans—Messrs. Martin and Company—Sources other than the Andamans—Splint and veneer factories in the forests—Chemicals—Cottage factories—Excise duty—Existing Customs duty—Works costs in cottage factories—Machinery—Prices of imported and Indian matches—Concerns financed with foreign capital—Unfair competition—Assistance required by the Cottage Match Industry 387

2. Burma Indian Chamber of Commerce, Rangoon—

A.—WRITTEN.

(i) Letter dated 30th November, 1926 412
(ii) Supplementary statements handed on 31st March, 1927—
(a) Note regarding Swedish Trust 414
(b) Note regarding restrictions on foreign capital in other countries 419
(c) Note regarding restrictions on foreigners 421

B.—ORAL.

Evidence recorded on 31st March, 1927—

Introductory—The Chamber's representation 423

3. Indian Match Manufacturers' Association, Bombay—

A.—WRITTEN.

Letter dated 29th December, 1926 439

B.—ORAL.

Evidence recorded on 7th December, 1927—

Introductory—Object of the Association—Warning against speculation—Wood supply—Cottage factories—Economic Unit 452

4. Northern India Chamber of Commerce, Lahore—

Letter dated 22nd January, 1927 471

5. Federation of Indian Chambers of Commerce, Bombay—

Letter dated 15th February, 1927 473

	Page.
XXI.—Views of Chambers of Commerce, Associations, etc.—contd.	
6. The Buyers and Shippers Chamber, Karachi—	
Letter dated 19th March, 1927	473
7. Burma Chamber of Commerce, Rangoon—	
Letter dated 24th March, 1927	474
8. Burmese Chamber of Commerce, Rangoon—	
A.—WRITTEN.	
Letter dated 29th March, 1927	ib.
B.—ORAL.	
Evidence recorded on 30th March, 1927—	
Introductory—Views of the Chamber on the existing	
duty on matches—Quality of Indian-made matches—	
Burmese labour—Import duties on raw materials—	
Forest Royalties—Conclusion	476
9. The Indian Merchants' Chamber, Bombay—	
A.—WRITTEN.	
Letter dated 20th April, 1927	480
B.—ORAL.	
Evidence of the Indian Merchants' Chamber, Bombay,	
and the Indian Chamber of Commerce, Calcutta,	
recorded on the 13th February, 1928—	
Introductory—Activities of the Swedish Match Com-	
pany—No evidence of unfair competition—Regula-	
tion of foreign capital—Sales Syndicate—Cottage	
factories	484
10. Southern India Chamber of Commerce, Madras—	
Letter dated 3rd May, 1927	508
11. Karachi Chamber of Commerce, Karachi—	
Letter dated 4th May, 1927	ib.
12. Indian Chamber of Commerce, Calcutta—	
Letter dated 17th May, 1927	509
13. Mysore Chamber of Commerce, Bangalore—	
Letter dated 11th July, 1927	512
XXII.—Letter dated 5th December, 1927, from the Tariff Board to all	
Chambers of Commerce, Associations, etc., asking for their	
views on various observations made by Sir Padamji P.	
Ginwala on resuming the enquiry into the Match Industry	ib.
XXIII.—Replies received from—	
1. Burma Chamber of Commerce Rangoon—	
Letter dated 23th December, 1927	515
2. Bombay Presidency Trades Association, Limited, Bombay—	
Letter dated 29th December, 1927	516
3. Karachi Chamber of Commerce, Karachi—	
Letter dated 4th January, 1928	ib.
4. Upper India Chamber of Commerce, Cawnpore—	
Letter dated 16th January, 1928	518

XXIII.—Replies received from—*contd.*

5. The Indian Merchants' Chamber, Bombay— Letter dated 25th January, 1928	519
6. The Match Manufacturers' Association, Bombay— Letter dated 27th January, 1928	521
7. Rangoon Trades Association— Letter dated 30th January, 1928	524
8. Punjab Trades Association, Lahore— Letter dated 1st February, 1928	<i>ib.</i>
9. Maharashtra Chamber of Commerce, Bombay— Letter dated 1st February, 1928	525
10. The Buyers and Shippers Chamber, Karachi— Letter dated 1st February, 1928	526
11. Chamber of Commerce, Bombay— Letter dated 6th February, 1928	527
12. Bengal Chamber of Commerce, Calcutta— Letter dated 7th February, 1928	528
13. Indian Match Manufacturers' Association, Calcutta— Letter dated 7th February, 1928	530
14. Calicut Chamber of Commerce, Calicut— Letter dated 10th February, 1928	535
15. Indian Chamber of Commerce, Calcutta— (1) Letter dated 11th February, 1928 (2) Letter dated 2nd March, 1928	<i>ib.</i> 537
16. Calcutta Trades Association, Calcutta— Letter dated 11th February, 1928	539
17. Cochin Chamber of Commerce, Cochin— Letter dated 13th January, 1928	540
18. Madras Chamber of Commerce, Madras— Letter dated 15th February, 1928	541
19. Burma Indian Chamber of Commerce, Rangoon— (1) Letter dated 15th February, 1928 (2) Letter dated 29th February, 1928	543 545
20. Northern India Chamber of Commerce, Lahore— Letter without date	546
21. Southern India Chamber of Commerce, Madras— Letter dated 23rd February, 1928	548
22. Indian Chamber of Commerce, Tuticorin— Letter dated 10th March, 1928	549
23. The Punjab Chamber of Commerce, Delhi— Letter dated 16th March, 1928	<i>ib.</i>
24. Mysore Chamber of Commerce, Bangalore— Letter dated 23rd March, 1928	<i>ib.</i>

XXIV.—Messrs. Martin and Company, Calcutta—

A.—WRITTEN.

- (1) Letter dated 26th October, 1927, regarding supply of Andaman wood 550
- (2) Letter dated 12th March, 1928, regarding price of Andaman wood *ib.*

B.—ORAL.

Evidence recorded on 14th February, 1928—

Sale of Government Timber—Price of Wood—Auction of Government Timber 552

XXV Messrs. Steel Brothers, Rangoon—

A.—WRITTEN.

Letter dated 24th March, 1927, regarding freight rates 561

B.—ORAL.

Evidence recorded on 24th March, 1927—

The Extraction of Timber—Rate of growth of soft wood trees—Cost of plantations—Making of splints in a separate factory situated in the forest—Exportation of matchwood to India—Extraction—Supervision by the Forest Department 562

XXVI.—Messrs. Abdoolali Ebrahim, Bombay—

A.—WRITTEN.

- (1) Statement regarding market prices of matches 573
- (2) Affidavit of Mr. Lallubhai Chunilal 576

B.—ORAL.

Evidence recorded on 9th December, 1927—

Introductory—Marketing arrangements—Excise Duty —Excise Labels 577

XXVII.—Views of Individuals:—

Mr. M. G. Kale, Warda, Bombay—

Letter dated 3rd November, 1926 591

Mr. N. B. Mukerjee, Bengal—

(1) Letter dated 1st November, 1926 592

(2) Letter dated 30th December, 1926 593

Mr. C. V. Mudaliar, Madras Presidency—

Letter dated 27th December, 1926 596

Mr. K. C. Sen, Calcutta—

Letter dated 30th December, 1926 *ib.*

Mr. P. C. Roy, Khulna—

Letter dated 31st December, 1926 598

Mr. J. B. Williams (and others), Surat—

Letter dated 27th January, 1927 599

XXVIII.—Letter dated 25th March, 1927, from the Tariff Board, to certain firms asking for information about prices of foreign matches 600

	Page.
XXIX. —Replies received to the above communication from—	
1. Messrs. Mitsui Bussan Kaisha, Limited, Rangoon	600
2. Messrs. Eng Hing Hwat Brothers, Rangoon	601
3. The Kemmendine Match Company, Limited, Rangoon	ib.
XXX. —Letter dated 8th December, 1927, from Messrs. Hiranand Lekhranj, Karachi, submitting certain proposals for protection of Match Industry	ib.
XXXI. —Correspondence with Mr. A. P. Ghose, Calcutta, regarding oral evidence before the Tariff Board	602
XXXII. —Letter dated 7th December, 1927, from the Andhra Valley Power Supply Company, Limited, regarding their charges for the supply of electricity	603
XXXIII. —Letter dated 25th February, 1928, from Mr. H. Tsuda, Manager, Mitsui Bussan Kaisha, Limited, Kobe, to Mr. I. Kodama, Osaka, forwarding a statement showing the present position of the Match Industry in Japan	604



सत्यमेव जयते

No. 235-T. (14).

GOVERNMENT OF INDIA.

DEPARTMENT OF COMMERCE.

Simla, the 2nd October 1926.

RESOLUTION.

TARIFFS.

The present rate of duty on matches imported from abroad is Re. 1-8-0 per gross, which represents a duty of more than 100 per cent. *ad valorem*. The duty was raised to the above figure purely as a revenue measure, and the Government of India have consistently rejected requests from manufacturers in India that the duty should be declared a protective duty. Nevertheless, a high revenue duty naturally has a protective effect, and since 1922, when the present duty was imposed, numerous match factories have been established in India, some of them using indigenous woods, and others wood imported in the log from abroad. Concurrently, there has been a progressive decline in the customs revenue derived from matches. This revenue amounted to Rs. 154 lakhs in 1922-23 and Rs. 138 lakhs in 1923-24, but in 1925-26 it amounted (inclusive of the revenue from splints and veneers) only to Rs. 118 lakhs. As the Indian factories overcome technical difficulties and attain their full production, the decrease in customs revenue is likely to become more serious.

2. In these circumstances, the Government of India consider that the whole position requires investigation, and they have decided to entrust this task to the Tariff Board. The first point for enquiry is whether the three conditions laid down in paragraph 97 of the Report of the Indian Fiscal Commission are satisfied in the case of the match industry in India, and whether the industry should be protected. If the answer to this question is in the affirmative, the Tariff Board will report at what rate the import duty should be fixed in order to give the industry the protection it requires and whether alternative measures of protection could suitably be adopted. If the answer is in the negative, the Government of India theoretically will be free to lower the import duty on matches in the interests both of the consumer and their own revenue from this source. But the Tariff Board will report to what extent vested interests have been created in India as the result of the present rate of duty, how far those vested interests require consideration and what prospect there is of the match industry in India establishing itself, if the present rate of duty is maintained.

If the Tariff Board decides that consideration must be paid to the industry brought into existence by the present rate of duty and that the duty should be maintained at the present figure, or approximately at the present figure, it will further report whether the loss of customs revenue can be made up in whole or in part by any other appropriate form of taxation of the industry. In this connection, the attention of the Board is drawn to the remarks of the Honourable Commerce Member on the 24th March, 1924, in the Council of State. Generally the Tariff Board will investigate the whole question and make such recommendations as seem germane to the subject.

ORDER.—Ordered that a copy of the above Resolution be communicated to all local Governments and Administrations, all Departments of the Government of India, the Director General of Commercial Intelligence and Statistics, the Indian Trade Commissioner in London and the Secretary, Tariff Board.

ORDERED also that it be published in the *Gazette of India*.

G. L. CORBETT,
Secretary to the Government of India.



Press Communique issued by the Tariff Board on the 29th November 1926.

In the Resolution of the Government of India in the Commerce Department, No. 235-T. (14), dated the 2nd October 1926, the Indian Tariff Board was directed to investigate the question of granting protection to the Match Industry in India.

2. The Board has been instructed to examine the whole position of the industry but its attention has been specially drawn to the following points. Firstly, whether the three conditions laid down in paragraph 97 of the Report of the Indian Fiscal Commission are satisfied in the case of the Match Industry in India, and whether the industry should be protected. Secondly, if the industry satisfies these conditions and is to be protected, the amount of protection required and the methods by which such protection should be given. Thirdly, if the Board finds that the industry does not satisfy the conditions laid down in the Fiscal Commission's Report, whether it is necessary, in view of any vested interests which may have been created as a result of the present revenue duty, to maintain the duty at the present figure or at approximately the present figure; and if so, whether the loss of customs revenue, which is likely to result from the expansion of the industry in India, can be made up in whole or in part by any other appropriate form of taxation of the industry.

3. Any persons or firms who desire to claim protection for the industry in India or who consider that the present rate of duty *qua* revenue duty should be maintained, are requested to submit to the Tariff Board a full statement of the grounds on which they do so. Persons or firms who claim protection should state *inter alia* the grounds on which the industry can be considered to fulfil the conditions laid down by the Fiscal Commission, and whether any protection which may be found necessary should be given by means of protective duties or in any other form. In the case of those who desire that the present rate of duty should be maintained in view of any vested interests which may have been created, the nature and extent of such interests and their grounds for thinking that the match industry has a fair prospect of establishing itself in India, should be fully set forth.

4. All representations (with six spare copies) must be addressed to the Secretary and reach the office of the Board at No. 1, Council House Street, Calcutta, not later than the 31st December 1926. After their receipt, the Board will, if necessary, issue questionnaires. The representations, the questionnaires and the replies thereto will then be printed and published, and the opinions, in writing, of those who wish to support or oppose the claims made will be invited. The dates for the oral examination of witnesses who wish to appear before the Board for that purpose will be subsequently fixed.

**Letter from the Tariff Board, to all Local Governments, dated 7th
January 1927.**

I am directed to invite a reference to the Resolution of the Government of India in the Commerce Department, No. 235-T. (14), dated 2nd October 1926, in which the Indian Tariff Board was directed to investigate the question of granting protection to the Match Industry in India.

2. The subject of match manufacture in India has been dealt with in detail by Mr. R. S. Troup, Imperial Forest Economist to the Government of India, in his memorandum entitled "The Prospects of the Match Industry in the Indian Empire, with particulars of proposed Match Factory Sites and Woods suitable for Match Manufacture" which was published in 1909. Since that time, however, there has been considerable research work done in connection with the suitability of various kinds of wood for the manufacture of splints and veneers and it is believed also that the number of factories has increased. The Board is anxious to obtain as early as possible all information regarding the condition and prospects of the match-making industry in your province.

3. I am also to request that you will be so good as to furnish the Board with detailed information on the following points:—

A. (1) The existence, quantity and suitability of wood for the manufacture of—

- (i) splints,
- (ii) veneers, and
- (iii) packing cases.

(2) The proximity and accessibility of the source of supply of such materials with special reference to the question whether it would be possible to obtain them from a single source.

(3) The quantity, kind and cost of fuel available.

(4) The available supply of labour for the factory and the wages of such labour.

B. (1) The sites (whether included in Mr. Troup's memorandum or not) which are considered suitable for the establishment of match factories in your province and the special advantages of each site. If possible, maps indicating the sites may be supplied.

(2) The number, location and size of the match factories in your province and the approximate date of the establishment of each.

(3) The extent to which indigenous wood is utilised in such factories for—

- (a) splints,
- (b) veneers, and
- (c) packing cases.

(4) Whether any such factories have been erected on the sites selected by Mr. Troup in the memorandum referred to above.

(5) Whether any such factories have been closed as a result of financial losses and, if so, what have been the main causes of such failures

(6) Whether any such factories are owned, controlled or managed by foreign capitalists.

C. (1) What arrangements are in force for the sale of trees from Government forests to match factories?

(2) What is the royalty levied?

(3) Have any concessions for extracting timber for the manufacture of splints, veneers or packing cases been granted? If so, to whom?

(4) Whether as a general question of policy any restrictions are imposed by the Local Government on the grant of concessions to applicants of foreign nationality. If so, what is the nature of such restrictions?

(5) Has the Forest Department undertaken or is it likely to undertake in the near future any operations for the establishment of plantations of trees suitable for the manufacture of matches?

(6) Have any areas been planted with suitable trees by companies or firms undertaking the manufacture of matches?

D. What are the conditions of transport:

(a) during the monsoon;

(b) during the dry season;

and what is the cost of freight by road, river, rail or sea, whichever method or methods would be necessary with reference to each site mentioned in reply to B (1)?

E. What is the extent of the local demand for matches? How far can the factories dispose of their outturn in the local market?

F. What stage has the industry reached in your province?

4. I am to say that the Board may find it necessary to inspect some of the factories or sites for factories in your province and would welcome any suggestions which the Local Government may make in regard to the arrangement of a tour programme for this purpose.

5. The Board would be glad to receive your reply to this letter before the 20th of February 1927.



Government of Burma.

Letter dated the 7th February 1927.

In reply to your letter No. 58, dated the 7th January 1927, I am directed to forward for the information of the Tariff Board a copy of a memorandum prepared by the Chief Conservator of Forests, Burma, together with a copy of letter No. 320-1-2-8, dated the 26th January 1927, from the Chief Inspector of Factories, Burma, containing the information on the points referred to in paragraph 3 of your letter quoted above.

2. As regards paragraph 4 of your letter, I am to say that the question of tour programme has been dealt with in the demi-official letter* No. 12-I., dated the 4th February 1927, from the Hon'ble Minister for Forests to Mr. P. P. Ginzala.

3. A statement showing the value of matches and match making materials imported into and exported from Burma during the period 1907-08 to 1925-26 so far as figures are available, is also enclosed for the information of the Board.

Enclosure No. I.

THE MATCH INDUSTRY IN BURMA

Memorandum on the points detailed in paragraph 3 of letter No. 58, dated 7th January 1927, from the Secretary to the Tariff Board to the Chief Secretary to the Government of Burma.

Before attempting to give the information called for under the detailed heads, I must point out that Mr. Troup's Memoir on the prospects of the match industry in the Indian Empire was published in 1910 and in view of the position of the industry in India at that time, could only be of the nature of a preliminary reconnaissance of the possible prospects of the match industry. So far as concerns Burma, there were no statistics of the quantities of timber suitable for the match industry that were available in the country and in the absence of statistics any tentative selection of sites could only be theoretical. Except in respect of statistics recently collected for Insein Division, we have as yet no statistics as to the possible supplies of timber suitable for the match industry. With this preamble, I give below what information I can under the detailed heads.

A. (1) *The existence, quantity and suitability of wood for the manufacture of*

- (i) *Splints.*
- (ii) *Veneers.*
- (iii) *Packing cases.*

The same woods are, as a rule, used for splints, veneers and packing cases. As there is no great export from Burma, packing cases are not greatly in demand and are mainly made from timber which has been rejected as unsuitable for splints and veneers.

Suitable woods for the manufacture of matches exist in the forests of Burma and the quantity is adequate. They are, however, scattered over a large area in a sparse mixture with other species and it is very doubtful if extraction for the purpose of a sustained supply to a factory can be undertaken as an economic proposition. To work any but the most accessible areas will render the cost of the timber delivery at the factory prohibitive. The supply of suitable timber on these areas is limited and precarious and the agencies available for delivering the timber at the factory are uncertain and unreliable. The only possible exception to this generalisation is the case of

* Not printed.

pine (*Pinus Khasya*) of which a concentrated and reasonably accessible supply is available in parts of the Federated Shan States. I understand, however, that resin and the existence of knots cause this wood to be viewed with disfavour by the match industry.

Such being the position, it is believed that for purposes of the economic supply to a factory it would be necessary to undertake planting operations.

A. (2) *The proximity and accessibility of the source of supply of such materials with special reference to the question whether it would be possible to obtain them from a single source.*

This query is largely answered by my note under A (1). There is, so far as is at present known, no accessible source of supply that is capable of affording a sustained yield. In all forests timber suitable for the manufacture of matches is scattered over large areas frequently presenting difficulties in working and seldom aggregating on an average more than a fraction of a ton to the acre.

A. (3) *The quantity, kind and cost of fuel available.*

In Rangoon town wood fuel in the shape of conversion wastage is at present available at about Rs. 7 per 100 cubic feet within a radius up to two miles of a sawmill. For factories less favourably situated the cost of wood fuel may be placed at Rs. 12 per 100 cubic feet stacked. There should however be considerable quantities of fuel available from wastage at the factory itself. Outside Rangoon and especially away from main trading centres, the supply of wood fuel is precarious and any concern requiring fuel should base its cost on the cost of coal.

A. (4) *The available supply of labour for the factory and the wages of such labour.*

Unskilled labour for a factory is obtainable at Rs. 0.12-0 to Re. 1 per day per individual employed. Reliable skilled labour is difficult to obtain and it is believed that a European engineer is essential for supervision if the complicated machinery of a match factory is to be maintained in a reasonable state of efficiency.

B. (1) *The sites (whether included in Mr. Troup's Memorandum or not) which are considered suitable for the establishment of match factories in your province and the special advantages of each site. If possible maps indicating the sites may be supplied.*

In view of the precarious nature of the timber and fuel supplies and the fact that all chemicals have to be imported, it seems to me that the only sites that need be considered at present must be in the vicinity of large towns and probably only Rangoon, Mandalay and possibly Moulmein are worth considering. A site close to the forests for the manufacture of veneer and splints only combined with a finishing site near the market is not a practical proposition under existing conditions. Subject to the above, I give below a list of possible centres and append a map* showing their location. I must add that these centres are listed entirely on theory and that before any site could be considered in practice, a proper examination of all the factors involved would be necessary. No such examination can be made on the existing information. To collect reliable statistics for the purpose of gauging supplies of timber would involve a detailed examination of the forest concerned in each case. This detailed examination would take time and would probably involve an expenditure that was incommensurate with the results to be gained.

Possible centres for match factories.

1. Katha (Troup S. N. 3). From its position any supplies available from the forests on the Irrawaddy above Katha can be collected there. It is also connected with the rest of Burma by railway and steamboat service.

* Not printed.

2. *Inywa* at the mouth of the Shweli river below Katha is in a position to tap supplies from the Shweli river and connected with Katha and Mandalay by a regular steamboat service.

3. *Mandalay* (Troup S. N. 1) is the centre of the timber trade in Upper Burma and under existing conditions would be a more suitable site than Katha or Inywa.

4. *Monywa or Alon* (Troup S. N. 8 and 9) is at railhead on the Chindwin river and is the most suitable site to deal with supplies from that river.

5. *Pyinmana* is at the junction of the branch railway line to Magwe which taps considerable forest areas that are not unduly difficult to work.

6. *Myohla* (Troup S. N. 12).—This site is advocated by Professor Troup. It is just below Pyinmana and has certain facilities in that water transport is available in addition to rail transport.

7. *Toungoo* (Troup S. N. 26).—There are possibilities of obtaining timber *vid* the Kabaung and Sittang rivers.

8. *Pegu (or some site on the Pegu river above Pegu)*.—There are scattered supplies in the drainage of this river and little doubt that the forests will within a reasonable time be connected with Pegu by a motor road.

9. *Rangoon*.—The main trading centre of Burma.

10. *Moulmein*.

11. *Tavoy* (Troup No. 30).—Tavoy will shortly be connected with the rest of Burma by rail and a site there or on the railway to the north will be worth considering. There are large quantities of timber but their suitability for matchwoods has not been investigated.

12. *Mergui* (Troup No. 31).—There are large quantities of timber but their suitability for matchwoods has not been investigated. Labour would have to be imported.

13. *Kalaw in the Federated Shan States*.—Kalaw is on the railway line and possesses considerable possibilities if *Pinus Khasya* is acceptable to the match industry. There are considerable supplies of this species in the vicinity and under proper working a sustained and reasonably accessible supply of the timber could be made available.

B. (2) *The number, location and size of the match factories in your province and the approximate date of the establishment of each.*

There are at present four match factories, all located in Rangoon, as follows:—

(1) The Mahlwagon Match Factory—Owners Messrs. Adamjee Hajee Dawood and Company, Limited. Established in 1923 (about). Situated in Rangoon on the railway line and connected by a small stream with the Pegu River. Outturn—2,500 cases of 50 gross each per month.

(2) The Kamaung Factory—Owners The Burma Match Company. Established in 1910. Situated on the right bank of the Rangoon river about 3 miles below Dalla (Rangoon). Outturn—500 cases per month.

Changed hands twice, being opened by Mr. Lim Chin Tsong, then transferred to a Chetty firm and later in 1925 to the Burma Match Company—a subsidiary company of the Kemmendine Match Company. Influenced by Swedish Match Companies.

(3) The Kamayut Factory or Muslim Factory. Established about 1922. A very small factory on the Prome Road, Rangoon, belonging to Mr. Abawath, 28, Edward Street, probably turning out about 200 cases per month of a very inferior match.

(4) The Rangoon Match Works. Established about 1923. Situated in Rangoon and about the same size as the Kamayut Factory No. (3), and turning out about 500 cases per month.

This factory is under the control of the Japanese Match industry and depends almost entirely on imported woods from Japan.

B. (3) *The extent to which indigenous wood is utilised in such factories for*

- (a) *splints,*
- (b) *Veneers,*
- (c) *packing cases.*

The Rangoon Match Works (No. 4) depend almost entirely on woods imported from Japan. The other factories use local woods as far as possible; but subsidize their supplies by imported wood. Messrs. Adamjee Hajee Dawood and Company (No. 1) import some of their supplies from the Andamans.

B. (4) *Whether any such factories have been erected on the sites selected by Mr. Troup in the memorandum referred to above.*

The only site suggested in Mr. Troup's memorandum referred to that has been utilized is Mandalay and the Factory there has closed down.

B. (5) *Whether any such factories have been closed as result of financial losses and, if so, what have been the main causes of such failures.*

In addition to the factories enumerated under B (2) above, there was a factory at Mandalay, vide details below, and a small factory in Kemmendine, Rangoon, which was burnt down in 1926.

The Irrawaddy Match Factory, Mandalay, was established by Mr. Darwood about 1910-11 and closed down about 1918 apparently on the grounds of financial losses. It was bought by the Kemmendine Match Company (see No. (2), B (2), under Swedish control) in 1925 and run for a year when it was again closed down, apparently for financial reasons, one reason being that the match manufactured was inferior.

B. (6) *Whether any such factories are owned, controlled or managed by foreign capitalists.*

Foreign capitalists are interested in two factories, the Kamaung Factory (Sweden B (2), No. (2)) and the Rangoon Match Works (Japan, B (2), No. (4)).

C. (1) *What arrangements are in force for the sale of trees from Government forests to match factories?*

Outside reserved forests trees are extracted under license in the ordinary way. Inside reserved forests the right to extract is settled by putting areas up to tender.

C. (2) *What is the royalty levied?*

The royalty on timber extracted by license varies from Rs. 2 per ton of 50 cubic feet in Upper Burma to Rs. 4 per ton of 50 cubic feet in Lower Burma. The royalty on timber extracted from reserved forests is based on the tenders received. Normally it would be about Rs. 4 or Rs. 5 but in one case as much as Rs. 12-8-0 per ton of 50 cubic feet was tendered and is being paid.

C. (3) *Have any concessions for extracting timber for the manufacture of splints, veneers, or packing cases been granted? If so, to whom?*

In 1910 an agreement was entered into with Mr. Lim Chin Tsong to work timber suitable for matches from the Mahuya and Paunglin reserves of the Insein Forest Division at a rate of Re. 1 per ton of 50 cubic feet during the first five years and at ordinary rates, Rs. 3 per ton, thereafter. Working under this agreement ceased in 1922. Extraction totalled 400 tons during the concession period and roughly a total of 1,000 tons thereafter.

In 1914 Messrs. J. W. Darwood & Co., Mandalay, were granted favourable royalty rates (annas eight per log over 4½' girth and annas four per log below 4½' girth) for a period of seven years.

C. (4) *Whether as a general question of policy any restrictions are imposed by the local Government on the grant of concessions to applicants of foreign nationality. If so, what is the nature of such restrictions?*

The question has not, in my experience, arisen.

C. (5) *Has the Forest Department undertaken or is it likely to undertake in the near future any operations for the establishment of plantations of trees suitable for the manufacture of matches?*

The Forest Department has not undertaken any operations for the establishment of plantations of trees suitable for the manufacture of matches. It is possible that such plantations would be a sound investment; but until experiments have been undertaken it is impossible to gauge the finance of the prospects of growing matchwoods as a pure crop as little is known about their silvicultural requirements. Experiment is necessary to test results on different soils.

Whether these experiments should be undertaken is for Government to decide. They are unlikely to yield conclusive results in less than 15 years. Personally I favour these experiments being undertaken by Government and am of opinion that private concerns would be well advised to leave planting alone until experiment has settled the economy of the operations. That experiments have not been undertaken hitherto by the Forest Department is due to shortage of staff and the fact that its energies of recent years have been concentrated on solving the question of providing timber and fuel for the local people in the accessible parts of the reserved forests.

C. (6) *Have any areas been planted with suitable trees by companies or firms undertaking the manufacture of matches?*

No areas have been planted by companies or firms.

D. *What are the conditions of transport?*

(a) *during the monsoon;*

(b) *during the dry season;*

and what is the cost of freight by road, river, rail or sea, whichever method or methods would be necessary with reference to each site mentioned in reply to B (1)?

In view of my reply to B (1) it seems premature to deal with the factor of transport in respect of sites noted as possibly worth considering. The conditions of transport depend entirely on the situation of the forests with reference to the site. Where rail transport is available, it would probably be given preference over water transport as it is quicker and less precarious. Where roads exist as in the case of some of the forests connected with Rangoon and where distances are moderate, it is probable that motor transport would displace both road and rail transport in view of the lighter transhipment charges.

The all-in cost of timber delivered in the factories in Rangoon is about Rs. 30 per ton of 50 cubic feet.

E. *What is the extent of local demand for matches? How far can the factories dispose of their outturn in the local market?*

The local match is now trying to live down the bad reputation of the matches made in the beginning of the industry. People regard a white match as a good one and though now the local match is white, the first matches were grey coloured and not so good. The demand for local matches is therefore not very great and the biggest of the local factories now exports to Madras. It is believed however that with improvement in the quality of the output, the demand will increase.

F. *What stage has the industry reached in your province?*

The industry in Burma is still in the pioneer stage. It started in 1910-11. It has progressed but it has not prospered. Nor does it appear to be established on a firm basis. It has suffered from the usual undue optimism and haste which so frequently characterize new lines of enterprise in the country. There was no proper attempt made to study and take stock of the possible supplies of raw material before a factory was started. The supplying agencies

were not properly organized with the result that supplies were always precarious and when competition arose the cost of raw material became prohibitive. Expensive and complicated machinery was introduced without the necessary skilled labour to keep it efficient with the result that the factor of wastage was abnormally high.

G. General.—The Forest Department is solely concerned with the supplies of wood required for the industry and I confine my remarks to this subject.

Sources of supply of timbers.—I have already pointed out that wood suitable for the industry (except pine which the industry in Burma does not accept) are nowhere found concentrated in the natural forest but occur scattered over large areas in a mixture with other species. This fact alone render the supply of raw material to the mill expensive and even precarious.

Statistics are admittedly inadequate in regards the quantities of those woods that exist. This is being remedied gradually, but in view of the scattered occurrence of the woods, it is doubtful if reliable statistics are obtainable and if, when obtained, they will help much.

It seems therefore that if a steady supply at reasonable rates is to be made available this supply will have to be artificially created by planting. Such planting should however not be rushed at; but should be started only after full consideration of the financial aspect as a result of careful experiment. The forest soils of Burma are very variable and it may not be easy to get an accessible continuous block that will yield good result. If Government country is unable to produce any of the ingredients required to manufacture lines, I recommend that these experiments should be undertaken by the Forest Department. In this connection it must however be remembered that the country is unable to produce any of the ingredients required to manufacture matches except the wood. All chemicals, machinery and even paper have to be imported. Under the circumstances it is questionable whether the artificial creation of supplies of wood in the country is of sufficient importance to justify special steps being taken to this end.

Organization of supplies.—Various suggestions have from time to time been made by those interested in the industry that Government should take special measures to safeguard supplies and generally create a monopoly in favour of the industry. These suggestions were generally on the lines of prohibiting the extraction of species suitable for the industry for other purposes and allowing favoured rates of royalty on those species. In the early days of the industry these suggestions were acceded to as far as possible. Generally however the suggestions were vague and unpractical. In the light of practice they have not helped the industry.

The supplies from the unclassified forests are uncertain. The only reliable sources of supply are the reserved forests and the area of these forests accessible to the economic extraction of matchwoods is very limited. The accepted policy of Government in respect of reserved forests is that extraction should be undertaken by private agency and that the right to extract the produce available should be decided by competition at auctions or as a result of calling for tenders.

In consideration of the demands of the industry the right to work species of known utility for matchwoods has so far as possible been put forward for tender separately from the right to work other species. It is doubtful if this is economically sound as normally it should be cheaper to work all woods in one operation. The extraction of timbers other than teak throughout the province is however so ill-organised that it seems desirable to give those interested in the Match Industry a chance to make independent arrangements for extracting their supplies.

Imports of timber for the Match Industry.—The principal sources of import are the Andamans and Japan and the quantity imported is not great. In view of the precarious supply in the country it is under existing circumstances undesirable to interfere with these imports.

Enclosure No. 2.

Letter No. 320—1-2-8, dated the 26th January 1927, from the Chief Inspector of Factories, Burma, to the Secretary to the Development Commissioner, Burma.

Subject:—Match Industry in India—Investigation by the Tariff Board into the question of granting protection to the.

In reply to your letter No. 835—61-9 (27), dated the 20th January 1927, on the subject noted above, I have the honour to report that I have made inquiries and to submit the following views. As I presume that the Forest Department have been addressed on this subject I have practically no observations to make on the wood supply. The numbering of paragraphs in this letter correspond to those in India's letter under reference.

3A. (1) Splints, veneers and packing cases are all made, so far as my inquiries go, now from timber obtained in Burma, or from India or the Andamans.

3A. (3) There is sufficient refuse wood for the heating and part of the power requirements of the factories. Electricity from a public supply is generally used for the rest of the power. Where this cannot be obtained wood fuel is used. At present the amount of refuse is considered to be excessive, mainly owing to lack of skill on the part of the workmen. When this is remedied the fuel question may become more important.

3A. (4) The machine work is mainly done by Indians from the Central Provinces and by Tolugs and Oorias. They have to be trained and do not stay long generally at the factories. Pay from Rs. 21 to Rs. 25. Labour supply is insufficient and rather unsatisfactory.

The filling, etc., is done by Burmese girls. This class of labour is more permanent and satisfactory. They become much more skilful than the corresponding labour in Indian factories so that although the piece work rates are not much higher than in India some of the girls get as much as Rs. 8 or more a week. The supply of this labour is adequate.

3B. (2) The accompanying table gives the particulars asked for:—

List of Match Factories in Burma.

No.	Name.	Locality.	Number of persons employed.	Approximate date of establishment.
1	Adamjee Hajee Dawood & Co.'s Match Factory.	Upper Pazundaung, Rangoon.	1,349	15th January 1924.
2	The Raugoen Match Works.	A. V. Joseph's Road, Mahlwagon, Rangoon.	130	See note.
3	Messrs. M. E. Abowath & Co.'s Muslim Match Factory.	Mile 5, Kamayut, Rangoon.	115	2nd September 1925.
4	Dowau Bahadur's The Burma Match Company's Match Factory.	Kanoung, Pyawbwe P. O., Hanthawaddy District.	494	19th April 1916.
5	The Mandalay Match Company's Match Factory.	C. Road, Minde Ekin, Qr. Mandalay.	192	27th March 1913.

* It was first established by Osman Masti Khan in 1924, it was burnt down in 1926 and was taken over by the present owners and rebuilt. It may be noted that the present owners had previously another factory established in 1924 which was burnt down in 1926.

† 4. This was established in 1916 by a Chinese British subject. He failed and the mill was taken over eventually by the present owners.

3B. (3) Splints are made from logs from Burma and Port Blair, Veneers from Burmese and Indian logs and packing cases from Burmese timbers. The supply of these timbers appears to be adequate now although there has been trouble in the past. No factories for the manufacture of splints, etc., have been established in the forest although this idea has been considered. These separate establishments will probably not be found necessary until the factories have to go further afield for their supplies. It does not appear that any woods obtained from outside the Indian Empire are used. The imports of splints seem to have quite stopped although when the industry was first started this was general.

3B. (4) Only B class factories have been erected. Their situations are shown in the table given above.

3B. (5) Some factories have had troubles with finance. All the factories mentioned in the table are running now except the one at Mandalay. It is rumoured that this is to be moved.

3B. (6) One factory No. 2 in the list is understood to be largely financed by Japanese although nominally an Indian concern. Another No. 5 is under Swedish control and management and it is believed that Swedish or Japanese interests are represented in some of the others.

6D. In the case of a large Rangoon factory 80 per cent. of the timber comes by water and 20 per cent. by rail. This refers to Burmese woods only. The amount of woods imported from India and Port Blair is believed to be unimportant. There is no difficulty in transporting the timber. If it were desired to use timbers from far upcountry no doubt separate splint factories would have to be built if the timber could not be rafted.

6E. There is no difficulty in disposing of all the matches now manufactured. One factory sends 35 per cent. of its outturn to India, more, it is believed, to attack the importing Swedish firms than because there would be any difficulty in selling the matches locally. The idea seems to be to prevent the Swedish firms putting up the price in India and using the high profits to enable them to dump in Burma and to ruin the Burma Match industry. There is considerable rivalry between the local producers and importing firms and kid gloves are not in much demand by either side.

F. The industry in this province is quite healthy and growing up nicely. It still requires protection owing to the labour being unskilled and the wastage consequently high, but the manager of the biggest firm here said that in 10 years time protection would no longer be required. The number of persons employed in the industry is only shown in part by the table in this letter. No account has been taken of the forest workers, rafters, etc. As a set off to the drop in customs duty on matches it is suggested that the extra duty on chemicals, labels and papers, the income-tax obtained from manufacturers and the royalty on forest produce should be considered.

Statement showing the value of matches and match making materials imported into and exported from Burma and the amount of import duty realised thereon during the period 1907-08 to 1925-26.

IMPORTS.																EXPORTS.			
Years.	MATCHES.					TIMBER USED FOR THE MANUFACTURE OF MATCHES.					MATCHES.								
	From Europe.	From other countries.	From India.		Total Cols. 2-5.	Pine and dealwood.	Spirits and veneers.		Total Cols. 8-9.	Duty on matches.	Duty on spirits and veneers.	Total Cols. 10-11.	To India.			Total Cols. 13-15.			
			Foreign merchandise.	Indian merchandise.			Foreign Merchandise.	Indian Merchandise.											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
	Val. Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Val. Rs.	Val. Rs.	Val. Rs.	Val. Rs.				
1907-08	1,98,765	11,18,456	43,486	...	13,57,726	...	...	13,57,726	...	...	...	...	2,872	...	2,872
1908-09	1,81,798	10,29,337	42,356	...	12,53,491	...	...	12,53,491	...	...	...	...	23,596	...	23,596
1909-10	1,53,015	14,42,018	40,820	...	16,35,553	...	...	16,35,553	...	...	...	...	27,635	...	27,635
1910-11	1,95,759	13,27,379	54,233	...	15,77,371	...	...	15,77,371	...	...	...	1,440	28,383	...	29,825
1911-12	1,66,319	13,06,119	45,666	...	15,18,604	...	...	15,18,604	...	...	...	387	30,331	...	30,728
1912-13	1,73,706	17,11,004	61,663	...	18,51,373	...	...	18,51,373	...	...	...	2,310	29,704	...	31,214
1913-14	1,78,608	13,30,128	76,041	...	16,84,867	...	...	16,84,867	...	...	...	8,299	18,867	...	22,166
1914-15	1,69,965	12,16,500	88,819	...	14,75,284	...	...	14,75,284	...	...	...	13,653	20,973	...	34,626
1915-16	1,22,687	19,39,031	80,158	...	21,41,876	...	...	21,41,876	...	...	...	16,613	6,660	...	23,273
1916-17	1,87,655	17,06,276	1,05,405	...	19,98,736	...	...	19,98,736	1,42,068	...	1,42,068	2,350	5,609	...	7,959		
1917-18	47,526	21,42,311	83,520	...	22,73,657	...	...	22,73,657	1,64,821	...	1,64,821	...	5,453	...	5,453		
1918-19 . . . . .	...	34,89,660	1,52,376	...	36,42,036	...	...	36,42,036	2,61,847	...	2,61,847	...	1,191	...	1,191	
1919-20	7,036	28,60,852	1,95,254	...	30,63,176	...	...	30,63,176	2,13,657	...	2,13,657	...	936	...	5,527		
1920-21	33,669	18,37,597	1,24,274	...	19,95,540	...	...	19,95,540	1,93,438	...	1,93,438	...	1,772	...	1,810		
1921-22	1,01,786	30,25,331	2,69,806	...	33,35,923	...	...	33,35,923	17,61,732	...	17,61,732	...	2,316	...	2,316		
1922-23	23,120	21,64,630	2,39,262	...	24,17,102	...	...	24,45,433	21,94,332	...	21,94,332	...	3,039	...	3,019		
1923-24	27,358	14,15,907	1,77,661	...	16,20,926	...	...	17,26,704	15,74,427	...	15,74,427	...	9,991	...	9,991		
1924-25	22,615	8,52,307	1,04,666	...	9,79,588	530	...	11,69,893	8,50,679	2,17,903	11,65,672	...	575	...	575				
1925-26	6,07,551	9,57,495	61,949	64,271	17,20,666	1,55,550	23,380	18,99,506	17,58,937	65,130	18,14,067	...	303	3,21,029	3,21,332				

Government of Madras.

(1) *Letter dated the 17th February 1927.*

With reference to your letter No. 58, dated the 7th January 1927, regarding match industry, I am directed to forward a note prepared by the Director of Industries and the Chief Conservator of Forests on the several points raised in your letter. Many of the match factories in this Presidency are not sufficiently important to be visited by the Board. The Board may, however, inspect the three factories situated in Madras if their programme includes a visit to this city. They may also, if time permits, visit with advantage the factories at Olavakot and Sattur as well as the power driven factories at Tirumalai and Alwaye in Travancore and Cochin respectively.

Enclosure No. I.

NOTE.

At the outset, it may interest the Tariff Board to know what assistance has been given during the last few years by the (two) Forest and Industries Departments to persons who contemplated the establishment of match factories. The question of conducting a survey of the possibilities of the match industry in the Madras Presidency received consideration, but finally it was decided that the Department of Industries could best assist the industry by furnishing, in consultation with the Forest Department, inquiries with information as to the availability of timbers likely to prove suitable, their quality and distribution and the price at which they could be made available at various centres, and by placing the inquiries in touch with manufacturers of up to date machinery and chemicals. Assistance has been rendered on these lines to a considerable number of enquirers. A number of industrialists who have started or contemplate starting small factories do not appear adequately to have appreciated the vital necessity of selecting a suitable site for their operations, and of ascertaining before-hand whether suitable match woods can be delivered at the factory site at a price which will admit of manufacture at a profit. Instances have occurred, and will be referred to later, where small concerns have come to grief owing to the failure of their proprietors to make the essential preliminary enquiries. A scheme for the starting of a small match factory requires to be very carefully investigated as it seems doubtful whether in view of the development of the larger match making companies small factories worked by hand can possibly hope to operate at a profit. It is certainly essential that before a factory of this kind is started, the cost of raw materials at site, chemicals and labour should be worked out with the greatest care and it should preferably be established near the source of timber supply and in proximity to a forest dépôt. The difficulty of extracting timber at a price low enough to enable match manufacture to be conducted at a profit is not always appreciated by enquirers who appear to think that it should be an easy matter for the Forest Department to supply them with timber in the required quantity at a sufficiently low price whereas the centres where suitable timber is available appear to be very few.

2. We will now proceed to reply so far as information is available to the questionnaire for the Tariff Board.

A. (1) *The existence, quantity and suitability of wood for the manufacture of (i) Sprints, (ii) Veneers and (iii) packing cases.*—In order to answer this question adequately, a detailed survey of the Presidency would be required. The idea of such a survey was first mooted in January 1922 and the Chief Conservator of Forests was called upon to collect preliminary details with a view to facilitating the work of the special officer if appointed subsequently. The preliminary enquiries that were made by the Forest Department went to show that Bombax and other species suitable for match

making that grow in deciduous forests are so scattered that extraction costs are rendered excessive. Mr. Cox, the then Chief Conservator of Forests, suggested the ever green forests as a source of supply, and as a result it was arranged to test some of the commoner species of the ever greens. The Chief Conservator, however, on learning that 10 annas a c.f.t. at the factory was as much as the industry could afford to pay, considered that any idea of starting a match industry should be abandoned as far as timber is concerned. The projected survey was therefore definitely abandoned and hopes for the industry were centred on the utilisation of the Eeta bamboo, which unfortunately the Malabar Match Company have found impossible to exploit successfully for their Alwaye factory. As no systematic collection of data in regard to the availability and suitability of wood for the manufacture of splints, veneers and packing cases has been made, this question cannot be answered in any great detail and the information given below has for the most part been collected from Mr. Troup's reports, Mr. Ghose's possibilities of Match Industry in Bengal, "Note on Prospects of establishing Match Factories in South India" by the Conservator of Forests, Travancore, and reports from the Forest Economist, Dehra Dun and various interested firms.

(i) *Splints*.—Tests carried out by different firms on the same species are in many cases contradictory; for instance, Ashleigh and Co., London, reported that *Cullania excelsa* was entirely unsuited for match making, whereas a Calcutta firm considered it suitable for splints, if bleached. Mr. Ghose gives a long list of suitable woods but Mr. Pearson of the Western India Match Company, a unit of the Swedish Combine, says that in the course of his investigation he has only found two really suitable species. *Populus euphratica* which is not found in Madras forests, and Mango which is not common in reserved forests. The requirements of a good match wood are that it should be white, straight-grained, moderately light and porous and unfortunately few of the available timbers come up to this specification.

The following is a list of woods that might be suitable for splints.

<i>Deciduous.</i>	<i>Evergreen.</i>
<i>Ailanthus excelsa</i> .*	<i>Vateria indica</i> .*
<i>Bombax</i> .	<i>Alstonia scholaris</i> .*
<i>Anthocephalus Cadamba</i> .*	<i>Lophopetalum Wightianum</i> .*
<i>Boswellia serrata</i> .	<i>Machilus</i> .
<i>Gmelina arborea</i> .*	<i>Polyalthia fragrans</i> .
<i>Odina Wodier</i> .	<i>Diospyros</i> .
<i>Hymenodictum excelsum</i> .	<i>Canarium strictum</i> .*
<i>Semicarpus anacardiaceae</i> .	
<i>Sterculia urens</i> .	
<i>Tetrameles nudiflora</i> (said by Troup to be unsuitable).	
<i>Trewia nudiflora</i> .	
<i>Garuga pinnata</i> .	

(Those marked with asterisk * would probably fetch better prices for purposes other than match-making.) The species included in both lists grow scattered among other trees rendering cheap exploitation impossible. The idea of attempting to work the industry on these lines has been rejected many times by Forest officers whose judgment is borne out by the recent experience of the Western India Match Company who report that they have proved that in most cases it does not pay to exploit single trees from mixed deciduous forests.

(ii) *Veneers*.—Many species appear to be suitable for veneers for boxes and those enumerated in Appendix B, attached, have been favourably reported on. The species, however, are not gregarious and most of them grow in forests usually worked for fuel coupes.

(iii) *Packing cases*.—There are many woods suitable for packing cases but the prices which factories can afford to pay for timber for this purpose are on the low side.

3. A-2. We are not aware of any situation in Madras forests which could be worked to meet the demands of a match factory alone, because the match industry cannot utilise all kinds of timber. A match factory could only be cheaply supplied in conjunction with the working of the forests for other purposes, *i.e.*, timber production, and when it is considered that 75,000 c.ft. would be required annually for a small factory, it will be realised that the area required to yield the supply would be very large and consequently extraction costs would be high. If the outturn of the forests is 400 c.ft. an acre, and half of that is allowed as suitable for matches it would require annually 375 acres to be felled over. A scheme for exploiting woods for match manufacture should preferably be linked with a general scheme for extracting all marketable timbers and utilising waste ends for splints and veneers by working them up at the site. The only possibility of the successful establishment of a match factory would appear to be in connection with a large scale exploitation unit such as has been proposed for Someshwar or Nilambur, the match factory utilising the species suitable for its use and the veneer plant and saw mills the remainder. The match industry cannot afford to pay much for its primary raw materials and it is only by large scale extraction that logs could be made available for match factories at a sufficiently low price. The only saw mill where the Forest Department have any quantity of soft woods is Olavakot, and there are already two match factories near there. In any location the Forest Department would have difficulty at present in supplying a sufficient quantity of suitable wood and under present circumstances, therefore, it seems probable that a large factory would have to use imported timber for splints and veneers.

4. B-1 and B-4. Mr. Troup has mentioned in his memoir a number of sites in the Northern Circle as possibly suitable for the establishment of match factories, but Mr. Lushington, a former Conservator of Forests, did not consider that any site in this circle would be suitable except somewhere along the Godavari river. The then Chief Conservator of Forests in 1922 stated that he could not conceive of a regular supply of species being forthcoming from the Agency forests. A match factory has recently been set up at Bellary which proposes to draw its supplies mainly from the Forest Reserve near Chelama. The Government forests can only guarantee a supply of 15,000 c. ft. per annum and that in not very suitable species, so that the factory is likely to experience some considerable difficulty in carrying on operations. A Cocanada gentleman contemplated some time ago the flotation of a company with the object of starting a large scale match factory at Rajamundry but no progress appears to have been made with the project. The objection to the establishment of factories at Tellichery, Udumalpet and Calicut is that it would not be possible to make available a cheap supply from reserved forests, owing to the cost of extraction and transport; while in the case of the two former at least there would not be sufficient supplies. A small factory has in fact been started at Udumalpet but information as to the scope of its operations and the source of its wood supply is not at present available. According to Mr. Troup, a match factory to be successful should be able to command (i) a sufficient supply of suitable and inexpensive wood, (ii) cheap transport from the forest to the factory and (iii) cheap transport from the factory to the area of consumption, while the factory should be capable of working all the year round.

We are unaware of any site in the Madras Presidency which fulfils these essential conditions. From the forestry standpoint, it is essential for the forests to be worked with a view to the conservation and improvement of forest capital, which means that all the crop must be made use of and in such a manner as to enable a fresh crop to grow advantageously. Owing to the nature of the Madras forests, it is impossible to procure adequate supplies of cheap timber. The Eeta bamboo in Tinnevely gave promise

of satisfying the necessary conditions, but as already stated it has so far been found impossible, in the factory established at Alwaye in the Cochin State, to overcome the technical difficulties experienced in utilising this material.

5. B-2. A statement, Appendix (A) embodying, so far as information is available, the names and location of the match concerns established in this Presidency, their capacity, date of establishment, timber used and capital invested, is attached from which it will be observed that the number of factories working at present is nine. Numbers 3 and 9 are under the same management, the former deriving its supplies of splints and veneers from the latter and working them up into manufactured form at their Madras factory. The Malabar Match Works, Palghat, is at present the only power driven factory although the Madras Match Factory, which at present contains only hand driven machines, will shortly, it is understood, be operated by power.

6. B-3. Indigenous wood appears to be utilised in all cases although the New Madras Match Factory has, it is believed, occasionally imported timber in logs from Japan.

7. B-5. Mr. Troup's criticism made 18 years ago that several of the match factories started in India up to that time were not successful owing chiefly to the wrong selection of sites still holds good and this coupled with the failure on the part of many factory proprietors to conduct the essential preliminary enquiries as to the availability of a suitable wood supply at a reasonable price accounts for the financial loss sustained by a number of factories. A typical case illustrating how an enterprise came to grief owing to the wrong selection of a site and insufficient preliminary enquiries into the supply of the requisite raw materials was brought to the notice of the Department of Industries in the year 1922-23. A firm in the Kistna district invested their capital in the establishment of a small factory without first ensuring that the requisite supplies of timber were available in the neighbourhood. After carrying on experimental manufacture for a year they had to close down operations. Another instance of failure occurred in Guntur where a party reported that the machinery obtained from a Calcutta firm had proved to be entirely unsatisfactory in practice. A party in the Madura district first proposed to start a factory on the banks of the Periyar river, but later transferred it to Madura, and then requested Government to open a timber depôt there for the purpose of supplying him with certain varieties of wood. Inquiries made by the Forest Department indicated that while nine of the species required were not available, the remaining six were so scattered that their exploitation for a commercial enterprise would be entirely out of the question and furthermore they could not be made available except at a prohibitive cost and regular supplies could not be guaranteed. In April 1925, the proprietor transferred the machines to Shencottah with a view to locate the factory in proximity to the forest areas where match wood were believed to be available in quantity. As the coupe contractor was unable to supply the requisite quantity of 16 candies per mensem, the proprietor intimated that he was willing to shift the factory to any place, *e.g.*, Kanjikot or Nilambur in South Malabar if the Forest Department would agree to supply him the quantity of timber required for an enlarged factory, *viz.*, 50 c. ft. per day. He was informed in reply that though the West Coast would appear to afford a more suitable location for his concern, yet difficulty would be experienced even there in obtaining supplies of suitable wood at sufficiently low rates as all suitable match woods are also in demand for coffee and tea boxes and prices are therefore comparatively high, while although the Forest Department have a quantity of soft woods available at their Olavakot Saw Mills, there are already two match factories near there. A small factory started in the Cauvery delta near Tanjore also experienced difficulty in obtaining timber for the manufacture of splints and veneers at a price which would render commercial manufacture possible. These are not the only instances which have occurred of the establishment of factories in

unsuitable locations which have had subsequently to transfer the venue of operations elsewhere. Other factors which have contributed, in a greater or less degree, to the failure of match concerns have been the high cost of chemicals, the unsuitability of the machinery, lack of experience, capital and technical knowledge and last but not least the keen competition of the superior imported products.

8. B-6. There are no match factories in the Presidency which are owned, controlled or managed by foreign capitalists. The Swedish Match Combine are understood to contemplate the starting of a factory in the Madras Presidency but no definite information is available as to the location and scope of the projected factory.

9. C-1. There are no special arrangements.

C-3. No.

C-4. The question has not yet arisen in any form.

C-5. No, as it is not considered that the plantation of trees suitable for the manufacture of matches would be remunerative.

C-6. No, not so far as is known.

10. D. (a) On the West Coast, carting is usually impossible during the monsoon months.

(b) During the dry season country carts are used.

11. E. The entire output of the nine established match factories does not exceed 268 gross per diem and so far as information is available, no difficulty is experienced in disposing of it. The quality and get up of the matches do not, generally speaking, approach the standard of the well known brands. The value of matches imported into the Madras Presidency during each of the last four years was as follows:—

Years.	Value in Rs.
1922-23	14,61,262
1923-24	12,87,970
1924-25	12,58,528
1925-26	12,88,476

Over a million gross of boxes are imported into the Madras Presidency annually, and of the 12·88 lakhs worth imported during 1925-26 Sweden supplies matches to the extent of 10·08 lakhs and Japan 1·57 lakhs. It will be observed that the imports of matches into the Madras Presidency have not materially decreased as a result of indigenous manufacture which has so far made little or no impression on the market. The match concerns so far established in Southern India, with the exception of the South Indian Match Factory at Tenmalai in the Travancore State and the Malabar Match Manufacturing Company (Managing Agents Messrs. Peirce Leslie and Company) at Alwaye in the State of Cochin, are comparatively small enterprises, whose production appears to commend a purely local market.

12. F. The prospects of the match industry in this Presidency have been referred to in the answers to the various questions. They cannot be considered very hopeful since it will probably always be difficult to obtain supplies of suitable wood at a price which will render commercial manufacture possible in view of the fact that such woods are found scattered in mixed forests intermingled with more valuable timbers. It is difficult to extract even valuable timber at a remunerative cost. In the case of the match woods cheapness is the all important factor and unless the timber is concentrated the cost of felling, logging, dragging and sawing into convenient sizes for match making will generally render the price prohibitive. In fact the conditions in the Madras Presidency appear to find a close parallel in the Philippines and in view of its applicability to Madras we venture to quote

the following extract from pamphlet No. 24 of the United States Department of Commerce, Trade Promotion Series.

“ An economic exploitation of the Philippine match woods is very doubtful. No doubt sufficient match woods are available in the Philippines for a factory of fair size, but because of their distribution, economic exploitation is not practical. Match woods are abundant but are very widely distributed. They are not obtainable in large quantities at any one place for economic handling. The native woods so far used by the local match factory have not proven very satisfactory on account of their having coarser texture and more crooked grain than American match woods. Matches now made in the Philippines cannot compete with matches made in Japan or in the United States ”.



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APPENDIX A

[illegible]

APPENDIX B.

List of species reported to be suitable for veneers.

- | | |
|--------------------------------|-------------------------------|
| 1. Ailanthus malabarica. | 20. Litsaea Polyantha. |
| 2. Alstonia scholaris. | 21. Lophopetulum Wightianum. |
| 3. Anthocephalus cadamba. | 22. Macaranga. |
| 4. Bombay insigne. | 23. Machilus macrantha. |
| 5. Bombax malabaricum. | 24. Mallotus Philippensis. |
| 6. Crataeva religiosa. | 25. Meliosma simplicifolia. |
| 7. Cullenia excelsa. | 26. Michelia Champaca. |
| 8. Dillenia pentagyna. | 27. Michelia Nilagirica. |
| 9. Dysoxylum benectiferum. | 28. Odina wodier. |
| 10. Elaeocarpus agallocha. | 29. Premna latifolia. |
| 11. Exeocaria agallocha. | 30. Pterospermum acerifolium. |
| 12. Ficus Benjaminia. | 31. Salix tetrasperma. |
| 13. Ficus cunia. | 32. Sterculia alata. |
| 14. Givotia rottleriformis. | 33. Sterculia urens. |
| 15. Gmelina arborea. | 34. Symplocos Spp. |
| 16. Holarrhena antidysentrica. | 35. Tetrameles nudiflora. |
| 17. Holoptelea integrifolia. | 36. Trema orientalis. |
| 18. Hymenodictum excelsum. | 37. Trewia nudiflora. |
| 19. Kydia calycina. | |

(2) Letter No. 1462-II—27-1, dated the 7th May 1927.

In continuation of my letter No. 144-II—27-2, dated 17th February 1927, I am directed to forward a statement containing particulars of certain other match factories in the Madras Presidency. Information regarding these concerns was not received in time to be incorporated in my previous letter.

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Serial No.	Cost of production.	Sale price.	Approximate cost of machinery installed.	Extent of local demand.	Remarks offered by proprietor on probable results of a reduction in duty.
1	Rs. 1-8-0 to Rs. 1-12-0 per gross	...	Rs. 7,000	Sufficient local demand—provided sale price is cheap.	The lowering of the present rate of duty would crush the indigenous industry.
2	.....	...	...	....
3	.....	...	...	....
4	" 1-10-0 per gross.	...	5,000	Good local demand, but for the competition of Swedish firms' matches.	If the duty is reduced, the concern would be greatly affected prejudicially; on the other hand, it is advisable to increase the present duty on imported matches and also that on imported foreign wood. (A duty should also be levied on foreign capital in Indian Match Companies.) If the duty is reduced, the company would not get any profit.
5	" 1-8-0 " "	Rs. 1-12-0 per gross.	4,000	No local demand, but matches sent to Coimbatore, Madurai, and Tinnevely for sale.	If the duty is reduced the industry would be prejudicially affected.
6	" 1-8-0 " "	Rs. 1-10-0 to 1-12-0 per gross.	300	No local demand, but matches sent to Erode and Tirupatur.	
7	" 1-6-0 to Rs. 1-7-0 per gross.	Rs. 1-8-0 per gross.	...	Only wooden frames and polishers all constructed locally—good local demand.	If the duty is reduced, the concern will be affected, even vitally.

Serial No.	Cost of production.	Sale price.	Approximate cost of machinery installed.	Extent of local demand.	Remarks offered by proprietor on probable results of a reduction in duty.
8	Rs. 1-6-0 per gross . . .	Rs. 1-8-0 to " 1-10-0.	Rs. 10,000	No local demand, but matches exported to Southern Dis- tricts.	If the duty is reduced, the concern will have to be wound up.
9	" 1-9-0 " . . .	" 2-0-0	...	.....	If the duty is reduced, the industry would be affected.
10	" 1-8-0 " . . .	" 1-12-0	...	Local demand about 30 gross per week.	If the duty is reduced, the concern will have to be wound up.
11	Splints Rs. 2-8-0 per maund Box-wood 2-8-0 for 50 gross .	" 8-0-0 " 8-0-0	9,000	No local demand, but matches sent to Madras, Vellore, Tri- chinopoly, etc.	If the duty is reduced, the industry would be affected.
12	Rs. 1-8-0 per gross . . .	" 1-12-0	7,000	80 gross per month . . .	If the duty is reduced, the industry would be affected.
13	" 1-8-0 " . . .	" 1-12-0	5,000	100 do.	If the duty is reduced, the factory will have to be closed.

Serial No.	Name and locality of the Match Factory.	Size (output per day).	Approximate date of establishment.	EXTENT TO WHICH INDIGENOUS WOOD IS UTILIZED FOR			Worked by hand or power.	Supplies of wood whence obtained.	Labour and wages.
				Splints.	Veneers.	Packing cases.			
1	The Indian Match Factory, Madurai.	30 gross.	April 1923.	<i>Spondias magnifera</i>	<i>Bondax cum.</i>	...	Hand.	Obtained from neighbouring reserves and from forests near Shencottah. Supplies inadequate.	Available locally. Boys Rs. 3 to 6 per month; adults Rs. 12 to Rs. 20 per month.
2	The Agniswara Match Factory, Tirukadpalli (Tanjore District).	10 gross.	April 1925.	Supplies of wood obtained from Olavakkott (Malabar District). <i>Bondax matlabari-cum</i> available locally, used in the beginning, but discontinued owing to its bad colour and cross grained character.			Do.	Supplies of wood obtained from Olavakkott (Malabar District).	Available locally. Boys Rs. 5 per month; men Rs. 8 to 10 per month.
3	L. Jagannadham, Match Manufacturer, Masulipatan.	Manufactures pyrotechnic matches at present. (Formerly manufactured safety matches on a small scale from local woods, but abandoned as it did not pay).							
	The South Indian Lucifer Match Works, Sivakasi.	30 gross.	4th February 1924.	Splints and veneers obtained from Palghat and Kanji Kote in Malabar.	Veneers from Palghat and Kanji Kote in Malabar.	Packing cases obtained from second hand locally.	Daily requirements of raw wood, 7½ c.ft., packing case 1.	Local supply moderate.	35 labourers—average wage at Rs. 10 per month.
5	The Salem Safety Match Factory, Salem.	15 gross.	August 1924.	Wood obtained from the Match Works, Malabar, Palghat.			...	.....	Boys Rs. 3 to Rs. 8 per month.
6	The Impregnated Match Works, Salem.	5 gross.	November 1925.	Wood obtained from C. A. Mani & Co., Trichur.			...	...	5 to 6 persons—Rs. 5 to Rs. 8 per month.

Serial No.	Name and locality of the Match Factory.	Size (output per day).	Approximate date of establishment.	EXTENT TO WHICH INDIGENOUS WOOD IS UTILIZED FOR			Worked by hand or power.	Supplies of wood whence obtained.	Labour and wages.
				Splints	Veneers.	Packing cases.			
7	The Sultana Match Factory, Elipur, near Manaparai, R. S. District Trichinopoly.	15 to 16 gross.	October 1925.	Splints and veneers obtained from Kanji Kode and Palghat; second hand deal-wood boxes obtained from local merchants.			...	Suitable wood cannot be obtained anywhere in the neighbourhood.	Cheap labour available. 18 to 20 boys 4 annas to 12 annas per day.
8	Malabar Match Works, Erode.	50 gross.	November 1926.	Wood got from Malabar Match Works, Palghat. <i>Bombay malabaricum</i> Attali and Palai for splints and veneers. Packing cases purchased locally.			Hand.	.....	Rs. 1-8-0 to Rs. 3 per head per week. No employed 75.
9	K. R. Krishnaswamy Chetty's Match Factory, Udumalpet.	5 gross.	April 1924.	Splints and veneers got from Calcutta.			Do.	..	Rs. 150 a month.
10	Krishnaswamy Naidu's Match Factory, Idugavai, Thudiyalur, District Coimbatore.	2 to 3 gross	April 1926.	Splints and veneers got from Palaniappa Chetty, Palghat and Mani & Co., Trichur.			Do.	...	Rs. 3 to 4 per month.
11	Pushpanaji Match Works, Kanji Kode, South Malabar.	200 gross box making material 4 mannde of splints.	July 1923.	<i>Bombay Malabaricum</i> got locally.			Steam power.	.....	3 annas to 8 annas per head per day.
12	Squirrel Match Factory, Vaniyambadi.	5 gross per day.	March 1923.	Splints and veneers got from Palghat.			Hand power.	....	Rs. 2 per day for 4 to 5 coolies.
13	Swan Match Factory, Devasthanam Vaniyambadi.	20 gross per day.	September 1925.	Ditto			Do.	....	Rs. 5 per day for 10 to 12 coolies.

Government of the Central Provinces.

(1) *Letter, dated the 19th February 1927.*

With reference to your letter No. 58, dated the 7th January 1927, on the subject of the condition and prospects of the match-making industry in the Central Provinces and Berar I am directed to communicate the following information on the various points raised therein:—

A. (1) The woods in use at present for the manufacture of splint, veneers and packing cases are:—

- (i) *Semal (Bombax malabaricum)* used for splints, veneers, for making boxes both inner and outer and for packing cases. This is the most suitable of local woods for matches.
- (ii) *Salai (Boswellia serrata)* largely used for packing cases and to a smaller extent for splints. Veneers of *salai* are also used for making inner cases of match boxes.
- (iii) *Pulla (Nydia calycina)* used for packing cases.
- (iv) *Gunja (Odina wodier)* used for making inner cases only.

(2) Woods Nos. (ii), (iii) and (iv) are obtainable in sufficient quantities from Government forests and malguzari and zamindari areas and from Feudatory States, but the supply of *semal* is very limited in all the forests and particularly those adjoining the sites of factories working at present. It has to be imported from distant places, entailing heavy transport charges. In one case, *viz.*, the Laxmi Art Match Factory, Bilaspur, all the woods are obtained from Jangraon in the Raigarh State of the Central Provinces on the Bengal Nagpur Railway where the factory has taken a forest lease. In another case, *viz.*, the Amrit Match Factory, Kota, *semal* is obtained from the Balaghat and Bilaspur Forest Divisions, Kendra Zamindari and Rewah State, while *salai* is obtained from the local forests. In the third case, *viz.*, the Housa Match Factory, Kota, *semal* is obtained from the Pandaria State (42 miles from Kota), and from the Kendra zamindari (5 miles from Kota) and a small quantity from the Government forests, while *salai* and *pulla* are procured from local malguzari forests.

(3) Fuel is sufficient. The waste wood of the splints, veneers and packing cases is utilised as fuel. In one case a kerosene oil engine of 5 horse power is worked, the cost of oil consumed being Rs. 72 per mensem and in two other cases coal is used for the boiler, the cost of coal being Rs. 300 and Rs. 500 per mensem respectively.

(4) There is an abundant supply of labour, the wages averaging as follows:—

- Men (skilled) Re. 0-12-0 to Rs. 1-8-0 per day.
- Men (unskilled) Re. 0-5-0 to Re. 0-6-0 per day.
- Women (skilled) Re. 0-6-0 to Re. 0-12-0 per day.
- Women (unskilled) Re. 0-3-0 to Re. 0-4-0 per day.
- Children Re. 0-3-0 to Re. 0-3-6 per day.

B. (1) No investigation as regards sites has been made in this province.

(2) There are three factories. Two are located at Kota, railway station Kargi Road in the Bilaspur district on the Katni-Bilaspur branch of the Bengal Nagpur Railway and one is in Bilaspur town. The names of the factories are as follows:—

- The Amrit Match Factory, Kota. } *Bilaspur district.*
- The Housa Match Factory, Kota. }
- The Laxmi Art Match Works, Bilaspur.

All these factories are owned, controlled and financed by Indians. The Amrit Match Factory, the capital of which is Rs. 1,00,000 is the biggest of its

kind in the province and one of the oldest in India, having been established in 1897. The following machines are used:—

- 5 peeling machines, 2 chopping machines, 12 frame filling machines,
- 1 dipping machine, 6 outer case making machines and 6 inner case making machines. Power is supplied by a steam engine. The packing of match sticks in the boxes is done by manual labour by women. There are 400 employees in this factory.

The Housa Match Factory which was opened in 1926 with a capital of Rs. 60,000 is a small concern and appears to be badly organised. The following machines are used.

- 2 peeling machines, 8 splint chopping machines, 3 frame filling machines, 1 dipping machine, 3 outer case making machines and 1 inner case making machine. Power is supplied from a steam engine of locomotive type. Inner cases are also made by local women at their homes at the rate of 2 gross per woman per day and they are paid at the rate of one anna per gross, the material being supplied by the factory. The factory employs 60 hands.

The Laxmi Art Match Works which was opened in October 1925, with a capital of Rs. 20,000 is a small factory in which machine production plays a small part. The following machines are used:—

- 1 peeling machine, 1 dipping machine, 1 frame filling machine, 1 chopping machine, 1 outer case making machine, 1 inner case making machine and 2 grinding machines for composition. Power is supplied from a 5 horse power kerosine oil engine. This factory employs 50 hands.

(3) The wood used in the factories is wholly indigenous.

(4) No.

(5) The following five factories which were established in the province have been closed:—

The Ellichpur Match Factory, Ellichpur, Amraoti District, Berar.

The Laxmi Match Factory, Tumsar, Bhandra District.

The Saraswati Match Factory, Balaghat.

The Oriental Match Factory, Wardha.

The Kiran Match Factory, Sehora, Narshinghpur District.

The Ellichpur Match Factory was closed down during the war, partly because it could not import splints and chemicals from Germany as it used to do before the war and partly because it did not work throughout the year.

The Luxmi Match Factory was started with a capital of about Rs. 3,000 and worked with three small hand machines. The main cause of failure was lack of sufficient capital, and the following were contributory factors:—

- (1) The factory used to obtain wood from a long distance instead of from the Government forests close by for which heavy transport charges were incurred.
- (2) The wood thus obtained could not be used early and most of it was rendered useless in the rains.
- (3) The lower wages paid in the beginning had to be raised to the level prevailing in *bidi* factories in the locality.

The cost of production, therefore, equalled if not exceeded the prices ruling in the market, hardly leaving any margin of profit.

The Saraswati Match Factory was making matches by hand. It used to import splints, veneers and packing cases from Calcutta. The main cause of failure was financial losses brought about by the necessity of importing

splints, etc., The owner states that if he had been in a position to purchase machinery, which would have cost about Rs. 6,000 he could have made matches from wood produced in the district.

The Oriental Match Factory used to make matches entirely by hand without any machinery on the lines of cottage industries, which resulted in the cost of production being nearly equal to the selling price in the market. The factory could not therefore hold its own against foreign matches.

No recent information is available regarding the causes of failure of the Kiran Match Factory. But from previous reports it appears that this factory produced only 6 gross per day by hand dipping and that it could not compete with imported matches, partly because it used to import splints and veneers and partly because the plant which it had purchased was not in working order from the very beginning.

(6) No.

C. (1) No special arrangements are made. If desired permits to extract wood can be taken from day to day as is done by one factory.

(2) The royalty levied on one cart load of wood taken from Government forests is Re. 0-8-0 though a concession rate of Re. 0-4-0 is also allowed. The rates of royalty on wood obtained from the neighbouring States and local malguzari and zamindari forests vary from annas 8 to Re. 1-4-0 per cart, the States charging higher rates of annas 12, 13 and Rs. 1-4-0 per cart.

(3) No general concessions have been granted. But the Amrit Match Factory obtains wood from the Balaghat and Bilaspur forest divisions at concession rates.

(4) No restrictions have been imposed.

(5) No, and no such plantation is at present under contemplation.

(6) No.

D. (a) During the monsoon it is impossible to get any wood as there are no metalled roads in the interior of the forests and the wood has therefore to be stacked in the factories before the setting in of the monsoon.

(b) No special difficulties are experienced during the dry season. In the case of *semal*, the local supply of which is limited and has in consequence to be brought from long distances by rail and road, the cost of transport is considerable. On the whole the cost of transport by cart and rail, together with supervision charges, comes to about a rupee per cubic foot. The factories, however, do not have a single source of supply, and the cost of transport of individual factories must therefore vary according to distances. For instance, the Amrit Match Factory at Kota has to obtain *semal* from the Balaghat forest division, which is its furthest source of supply. The railway freight for one wagon load of wood (20 carts) costs the factory Rs. 96-4-0 and in addition the carting expenses from the forest to the railway station (about 10 miles) come to annas 10 per cart or Rs. 12-8-0 per wagon. The cost of transport only in this case works out at annas 10 per cubic foot. This factory's nearest source of supply is the Bilaspur forest division. In this case the cost of transport by road from the forest to the factory, 40 miles, comes to Rs. 10 per cart.

The Laxmi Art Match Works at Bilaspur obtains all its supply of wood from Jangaon in the Raigarh State of the Central Provinces. In this case the cost from the forest to Jangaon railway station is Rs. 1-8-0 per cart and that from Bilaspur railway station to the factory 3 annas per cart, while the railway freight from Jangaon to Bilaspur is Rs. 35-4-0 per wagon (25 carts).

The House Match Factory at Kota does not incur any expenses on account of transport of wood by rail, all its supplies being obtained by road from the neighbouring forests. Its furthest source of supply is Pandaria State which is 42 miles from Kota. The carting expenses come to Rs. 9-8-0 per cart from the forest to the factory.

E. The consumption of output is largely outside the province. The Amrit Match Factory's output is consumed as follows:—

Central Provinces 40 per cent.

United Provinces 30 per cent.

Bihar and Orissa 30 per cent.

The Housa Match Factory sells about 50 per cent. of the output locally, the other half being exported to the United Provinces.

The Laxmi Art Match Works sells locally 12 per cent. of the output and 88 per cent. in the other districts of the Central Provinces and the neighbouring districts of Bihar and Orissa.

F. Excepting the Amrit Match Factory, which is one of the oldest established factories in India, the other factories are new. The full capacity of the Amrit Match Factory is 1,200 gross per day, but owing to excessive competition the average output is 400 gross per day. The average daily output of the Housa Match Factory is 50 gross and that of the Laxmi Art Match Works 100 gross.

2. As regards paragraph 4 of your letter under reply, I am to suggest that, should the Board desire to inspect some of the factories in this province, the most suitable place would be Kota in the Bilaspur district on the Bengal Nagpur Railway.

(2) *Letter, dated the 9th March 1927.*

In continuation of this Government's letter No. 622—50—XIII, dated the 19th February 1927, I am directed to enclose for the information of the Tariff Board, the accompanying extracts from a report of the Chief Conservator of Forests, Central Provinces, furnishing certain additional information on the subject and to say that this could not be incorporated in the previous letter cited above as the report was not received in time.

Extract copy of letter No. C-146-P-265, dated Pachmarhi, the 15th February 1927, from Chief Conservator of Forests, Central Provinces, to the Revenue Secretary to Government, Central Provinces, Nagpur.

* * * *

B-1. As Troup points out in his book (Chapter X) success in the Central Provinces largely depends on the suitability of Salai wood. The following still seem very suitable.

South Chanda Division.—As Rajamundry is in Madras but getting its supplies from South Chanda Division by floating on the Godavery.

Ramtek (or near by).—Large and easy supplies of Salai fuel, etc., from Pench Ranges and Seoni district: large tanks near by; labour rates probably somewhat above the ordinary.

South Raipur.—On the forest tramway near Mohdi or the Mahanadi: Salai and fuel cheap, labour cheap.

Nimar.—On the railway anywhere between Khandwa and Burhanpur: Salai and fuel cheap and easy: labour plentiful but only fairly cheap.

Mandla.—Salai, fuel and labour probably plentiful and cheap. The above sites would seem to be first for consideration in the Central Provinces. The others suggested by Troup namely, Ghaterna (Damoh), Bagra (Hoshangabad), Gangajhiri (Bhandara), Shahpur (Betul) are all on the railway, very close to the sources of supply and with cheap labour: they are only second to those

mentioned above. Others of an exactly similar suitability and hitherto not mentioned are:—

Mahasamund.—In Raipur or near the Mahanadi.

Balaghat.—Any station between Nainpur and Balaghat.

Nimar.—If the Khandwa-Akola railway is built then near the Tapti crossing.

* * * *

C-5. No. The subject of plantations of *Bombax malabaricum* has recently been considered but no decision has been reached.

* * * *

D (c). All the sites in B-1 have been selected as on the railway and for proximity to the sources of supply of Salai, fuel, etc. Rates for these could hardly be cheaper anywhere than they would be at these sites.

* * * *

2. The whole question of match factories in the Central Provinces appears to hinge on the suitability of *Boswellia serrata* (Salai). If it is unsuitable then it would be a waste of time for the Board to tour in the Central Provinces. If suitable, then the possibilities from the point of view of cheap raw material, cheap labour and sites on the railway would appear to be rosy and the following tour could be made.

Raipur.—Visit by motor the match factory at Kotah, Bilaspur, Mahasamund, and the forest tramway site.

Balaghat.

Mandla.

Nagpur.

} To Ramtek and Pench forests by motor; also Nagbhir.

Hoshangabad and Chanda.—Motor to Shahpur and Bagra (open season only).

Khandwa.—By this tour all the suggested sites could be visited except Ghatara and Gangajhari neither of which is likely to be very important. Rajamundry could not be visited from the Central Provinces but is easily accessible from Waltair.

Government of Bihar and Orissa.

Letter, dated 21st February, 1927.

I am directed to acknowledge the receipt of your letter No. 58, dated the 8th January and to forward for the information of the Board a copy of the letters noted on the margin together with a copy of a Bulletin* prepared on behalf of the provincial department of Industries by Mr. A. P. Ghose comprising his report on investigations which he made in 1924 into the possibilities of the Match industry in this province.

1. Letter No. C-274, dated the 25th January 1927, from the Conservator of Forests.

2. Letter No. 473, dated the 12th January 1927, from the Director of Industries.

3. Letter No. 1974, dated the 7th February 1927, from the Director of Industries.

2. The Conservator of Forests (Mr. A. J. Gibson) states that he had particular experience of the problems of the match industry when serving in the Punjab, and the reply given in his letter No. C-274, dated the 25th January 1927 is in general terms. The Director of Industries' letter No. 473, dated the 12th January, is in reply to the Press Communiqué issued by the Tariff Board on the 29th November 1926. In his second letter No. 1974, dated the 7th February the Director of Industries replies briefly to your Questionnaire. I am to request that the opinions expressed both by Mr. Gibson and by Mr. Gupta may be read as the personal opinions of those two officers.

3. If the Board decides to inspect any of the match factories in this province (including the Government Demonstration Match Factory at Patna)

* Not printed.

or any possibly suitable sites for factories, the Local Government will be pleased to arrange a tour programme, on learning of the probable dates of the Board's visit and the length of time that it could spend in the province.

Enclosure No. 1.

Copy of letter No. C.-274, dated the 25th January 1927, from the Conservator of Forests, Bihar and Orissa, to the Secretary to the Government of Bihar and Orissa, Revenue Department.

SUBJECT: The Indian Match Industry.

I have the honour to acknowledge receipt of your memo. No. 223—Com.—11-C—27, dated the 21st January 1927, asking for information required for communication to the Tariff Board on the subject of the match industry in Bihar and Orissa.

2. Before discussing the conditions prevailing in Bihar and Orissa, I have some general remarks to make.

In paragraph 2 of letter No. 58, dated the 8th January, 1927, from the Tariff Board, to the Chief Secretary to the Government of Bihar and Orissa, which formed an enclosure to your memo. No. 223-Com.—11-C.—27, dated the 21st January 1927, reference is made to Professor (then Mr.) R. S. Troup's memorandum of 1909 on the match industry in India. That was a most unfortunate publication, prematurely issued mainly on information supplied by a German firm making match machinery. In confirmation I would draw your attention to paragraph 64, second sub-paragraph of the report of the Indian Industrial Commission, 1916-18, published by the Superintendent, Government Printing, India, Calcutta, in 1918.

In 1920 I was deputed by the Punjab Government to investigate the match industry in Sweden. I failed to get access to any match factory in that country but I learnt a good deal about the strangle hold Sweden then had and were still getting over the match industry of the world. On coming back to the Punjab I got reputable Indian and British firms interested in the subject of the match industry in the Punjab where the question of the supplies of suitable timber was specially favourable, but for reasons best known to themselves the Punjab Government squashed the negotiations. The opportunity was lost, and now every match factory of any importance in India is controlled by the Swedish match combine. This fact has, in my opinion, a very pertinent bearing on the subject of continuing protection to the match industry in India.

3. As regards the match industry in Bihar and Orissa, reference is invited to the comprehensive though possibly rather superficial report of Mr. A. P. Ghose, published by the Department of Industries in this province in 1924. This report practically covers the whole of the Questionnaire of the Tariff Board and unless Government wishes me to review the information given by Mr. Ghose's report I do not propose to go into the matter in detail. Besides much of the information required by the Tariff Board can only be supplied by the Director of Industries in this Province.

4. As regards timbers suitable for match making in Bihar and Orissa my own opinion is that the Province is badly situated in this respect. There are suitable species but they occur scattered over large areas, mixed with other miscellaneous forest trees, generally remote from lines of transport. Owing to the conditions under which the trees have grown the timber is often crooked and not very suitable for the 'bolts' required for the match veneer cutting machines. Consequently wastage is high which re-acts adversely on costs.

5. The remedy lies in starting plantations of trees suitable for match making. A start has been made in the Kolhan Forest Division at Posoita where 60 acres of inferior sal forest were cleared early in 1926 and partly planted up with suitable species from a nursery established at Goikera. This

area is being further extended by 400 acres this season. The plantation is admirably situated on the main line of the Bengal Nagpur Railway (Railway station Posoita) and it is hoped will be able to feed any match factories in the Singhbhum district if the latter are situated at railhead. Another plantation has been started at Berbera, Puri Forest Division, near Balugaon railway station which will be able to feed match factories at Cuttack or Puri.

6. No trees have been sold by the Forest Department, Bihar and Orissa, direct to match making companies. The Bettiah Raj forests have supplied the Gulzarbagh Government factory with some match woods.

7. The Questionnaire of the Tariff Board covers a large field at present largely in the realm of theory as regards Bihar and Orissa, and if further details are required, I suggest that I may be called as a witness before the Board when they come and inspect the existing match factories in the province.

Enclosure No. 2.

Copy of letter No. 473, dated the 12th January 1927, from the Director of Industries, Bihar and Orissa, to the Secretary, Tariff Board.

With reference to your Press communiqué dated the 29th November 1926, I have the honour to submit my views on the subject as hereunder:—

- (a) The match industry of this province as represented by the Government Demonstration Match Factory at Gulzarbagh, Patna, fulfils all the conditions laid down in paragraph 97 of the Indian Fiscal Commission and is, therefore, entitled to Tariff protection against foreign competition or competition by matches made in this country partly or wholly with foreign wood.
- (b) I am of opinion that in addition to maintaining or even increasing if deemed necessary, the present rates of import duty on finished matches, veneers and splints a suitable duty should be levied on all timber imported for the manufacture of matches, splints and veneers in this country.
- (c) All papers, chemicals, machineries and spare parts thereof required for the match industry should be allowed to enter the country entirely duty free.
- (d) Royalty on all match wood from the Government Forest should be reduced to as low a figure as possible.
- (e) Special freight concession and transport facilities should be afforded to the industry in order to enable it to avail itself of suitable match wood grown anywhere in this country.
- (f) Forest Departments both Imperial and Provincial should be instructed to put down extensive plantations of suitable match wood without further delay. My information is that there are some varieties of match wood which grow fast enough to be ready for felling within 5 to 7 years.
- (g) Government to make an investigation into the working of various trusts and combines which have established match factories in this country in order to determine how far they are resorting to unfair means of competition against the smaller factories and thereby establish monopolies to the detriment of the purely indigenous enterprise. Enactment of anti-trust laws in order to check and control the operation of combines and trusts interested in the match industry in this country should be undertaken if it were found that they were inimical to the best interests of the indigenous industry. By indigenous is meant those factories which work entirely with wood grown in the country and not imported wood, splints, veneers, etc.

Enclosure No. 3.

Copy of letter No. 1974, dated the 7th February 1927, from the Director of Industries, Bihar and Orissa, to the Secretary to the Government of Bihar and Orissa, Revenue Department, Patna.

SUBJECT:—Protection to the Match Industry in India.

With reference to the Government memo. No. 222-Com.—C. 11-C-27, dated the 21st January 1927, forwarding a copy of letter No. 58, dated the 8th idem, from the Secretary, Tariff Board, on the above subject, I have the honour to submit the following information:—

2. When Mr. R. S. Troup, Imperial Forest Economist to the Government of India, wrote his memorandum entitled "The Prospects of the Match Industry in the Indian Empire with particulars of proposed Match Factory Sites and wood suitable for Match Manufacture," which was published in 1909, the province of Bihar and Orissa formed a part of Bengal and there was no special mention of it in the memorandum. At the instance of the Government of Bihar and Orissa, however, one Mr. A. P. Ghose, Match Expert, was engaged to investigate into the possibilities of the match industry in this province and his report entitled "Report on the Investigations into the possibilities of match industry in Bihar and Orissa" was published in 1924, a copy of which is enclosed* for reference. It may be noted that as a result of this report, the Government have established a match factory at Gulzarbagh which commenced work in April, 1926.

3. A-1. For supplies of match wood, Chapter V at pages 38-43 of Mr. Ghose's report may be referred to. Of the woods mentioned in Mr. Ghose's report, the three species, viz., *Trewia Nudiflora*, *Bombax Malabaricum* and *Odina Wodier* have been found to be particularly suitable.

A-2. With proper organisation and whole hearted co-operation of all concerned, it should be possible to obtain all the requirements of wood from a single source.

A-3. The best fuel is coal, which is plentiful in this province and can be had at a reasonable price almost anywhere in the province.

A-4. There is no dearth of labour, skilled or unskilled. Skilled labour can be had from annas twelve to rupees two per day depending on the degree of skill. Unskilled labour can be had from annas four to annas eight per day.

B-1. The sites mentioned in Chapter VI of Mr. Ghose's report are all more or less suitable.

B-2. (a) Government Demonstration Match Factory, Gulzarbagh, was started in January 1926. Its capacity is 100 gross matches ($\frac{3}{4}$ size) per day.

(b) Orissa Match Works, Cuttack, was started in June 1925. Its capacity is 50 gross (full size) matches per day, which ought to be about 70 gross a day with half size.

(c) Puri Match Industries Company, Puri. It was started in 1922 with a capacity of 15--20 gross a day and has since increased its output. The Company have also applied for additional machines under the Bihar and Orissa State Aid to Industries Act to be installed with a view to further increase production to 50 gross per day.

B-3. All these factories use indigenous woods for splints and veneers and packing cases.

B-4. Mr. Troup did not mention any place in Bihar and Orissa in his memorandum.

B-5. About the war-time the undermentioned factories were started:—

1. Santosh Match Factory, Purulia.
2. Laxmi Match Works, Cuttack
3. Sas Match Factory, Ghatsila.

* Not printed.

4. Sun Match Works, Ranchi.
5. Keraikela Match Factory, Chakradharpur.
6. Banpur Match Factory in Puri.
7. Match Factory at Arrah.
8. Baldeo Match Factory, Kendrapara.
9. Swadoshi Match Factory, Muzaffarpur.
10. Rajmahal Match Factory.
11. Leo Match Factory, Rajgangpur.
12. Jenapur Match Factory in Cuttack.
13. Sahu Match Factory, Motihari.

All of them have either been closed or are in a precarious condition due to one or more of the following reasons:—

- (a) insufficient capital outlay;
- (b) under estimate;
- (c) wrong selection of match machines and system of work;
- (d) wrong choice of factory sites;
- (e) want of proper technical help;
- (f) difficulty of obtaining proper wood for matches;
- (g) incompetent management; and
- (h) inability to compete with foreign matches or superior matches made in the country with imported wood, veneers, splints, etc.

B-6. None of the factories are owned, controlled or managed by foreign capitalists.

C. 1-4. No information on these points is available in this office.

C-5. The Forest Department appears to be very keen about the plantation of match wood but no definite information is available in this office as regards their future policy and the scope and extent of their present operation in this direction.

C-6. No companies or firms undertaking the manufacture of matches have planted suitable trees anywhere in the province.

D. Rail transportation would appear to be prohibitive unless special concessional rates are granted. Floating down the river after the monsoon to factory sites from the interior is the cheapest if not by far the most satisfactory method of transport. The actual cost of this method of transport is, however, not known as the Bettiah Raj supplied the wood at annas ten per c. ft. delivered at Gulzarbagh Match Factory.

E. At page 58 of his report, Mr. Ghose says that the province requires in a round figure about 1,200,000 gross of boxes of matches per year, and in order to be self-contained it needs 40 factories with 100 gross production per day with 300 working days in the year. It is, therefore, evident that the existing factories can very easily dispose of their production in the local markets provided they are able to compete with matches made in Bombay and Calcutta from foreign woods and in fact the matches are seldom sent out of the province.

F. Match industry in the province has only recently been commenced. Its pros and cons have been fully examined at the Government Demonstration Match Factory, Gulzarbagh, and it is sure to prosper and develop with the concessions referred to in my letter No. 473, dated the 12th January, 1927, submitted to Government in the Education Department for transmission to the Secretary, Tariff Board.

4. I shall arrange for a tour programme of the Tariff Board, and inspection of factories by them on receipt of sufficient notice to this effect.

Government of Bengal.

Letter, dated the 23rd February 1927.

I am directed to refer to your letter No. 58, dated the 7th January 1927, in which the Tariff Board asked for certain information regarding condition and prospects of match making industry in Bengal.

2. In reply I am to say that an enquiry was made in 1922 by Mr. A. Ghosh, Match Manufacturing Expert, at the instance of the Government of Bengal, into the possibilities of match industry in this province and I am forwarding herewith a copy of the report* submitted by him which contains much of the information asked for in your letter under reference. I am also to enclose herewith copy of a letter from the Conservator of Forests, Bengal No. 1473-1-T.-27, dated the 20th March 1925, as well as an extract of the department letter to the address of the Director of Industries, Bengal No. 5461, dated the 11th November 1925, embodying the considered views of this Government on the several recommendations made in Mr. Ghosh's report. As explained in this department letter referred to, the Government of Bengal came to the conclusion that there were possibilities for the encouragement of the match industry, especially as a home industry, in this province, and the Director of Industries, Bengal, was accordingly asked to examine the matter from this point of view. The matter is still under investigation by him and his report is being awaited.

3. I am also to forward herewith a statement giving detailed information as far as available on the various points referred to in paragraph 5 of your letter under reply.

4. As regards the proposal made in paragraph 4 of your letter, I am to state that the (1) Calcutta Match Works, Garden Reach, (2) Western India Match Company's factory, Canal East Road, (3) Esavi India Match Manufacturer, Muraripukur Road, (4) Pioneer Match Factory, Dum Dum, and (5) M. L. Mehta Match Factory, Ultadighi, are good examples of the different types of factories for the purpose of inspection. It is however understood that the Director of Industries, Bengal, is already in communication with you on this matter and is arranging for necessary facilities being given for inspection of some of the factories by the Tariff Board. As regards the inspection of sites for factories, I am to suggest that, if the Board find it necessary after perusal of Mr. Ghosh's report, to inspect likely sites in the forest the sites selected for such inspection and the proposed dates may be communicated direct to the Conservator of Forests, Bengal, who will then arrange the necessary tour programme for the purpose.

Enclosure No. I.

No. 1473-1-T.-27, dated Darjeeling, the 20th March 1925, from N. C. Milward, Esq., Conservator of Forests, Bengal, to the Secretary to the Government of Bengal, Revenue Department.

In reply to your No. 1740-For., dated the 21st February 1924, I have the honour to say that I consider the report to be both interesting and informative but much too optimistic in regard to the supplies of timber available for the match industry.

2. From figures given in the report (page 44 (a) and (d)) it seems that 94 cubic feet of timber are needed for 100 gross of splints and 40 cubic feet for 100 gross including boxes. Working on these figures and those on pages 38-41 and comparing them with the figures of output in Form No. 1 of the Bengal Forest Annual Report for 1922-23 the requirements for the

* Not printed.

match industry exclusive of waste as compared with the outturn of timber and fuel from all sources during that year are as follows:—

Forest Division.	Requirements not allowing for waste. (c. ft.)	Total outturn in 1922-23. (c. ft.)
Darjeeling	1,366,800	1,183,000
Kurseong	372,600	741,000
Kalimpong	677,400	1,687,000
Sunderbans	2,916,000	9,940,000
Jalpaiguri	122,400	2,508,000
Buxa	387,600	3,400,000
Chittagong Hill Tracts	510,000	810,000
Cox's Bazar	60,000	1,042,000
Chittagong	204,000	1,166,000
TOTAL	6,556,800	22,477,000

Of the 2,247,700 cubic feet 13,070,000 were fuel and 9,407,000 timber. In Darjeeling Division, for instance, fuel amounted to 1,007,000 and only 176,000 cubic feet were timber. Since nearly the whole of the supply from the accessible forests in this Division is required for Darjeeling and the tea gardens which have for long depended upon it, it is unlikely that the match industry will obtain what it wants in the accessible areas near Darjeeling and Ghoom. If coal replaces wood fuel in the hills there will be more splint wood available but it is doubtful whether it will do so. On the other hand there are some of the less accessible areas in and beyond Manebhanjan in the Singalila range which may be opened up but clear felling can only be done if the forest can be artificially restocked. The gist of all this is that anyone who wishes to start a splint or complete match factory in the Darjeeling Division can draw useful information from this report or the local forest staff but he cannot expect to displace other industries of long standing and must be ready to make a detailed examination of all the conditions.

3. The Forest Department has no accurate figures of the available crop. This is a great drawback which has been mentioned before but it must be understood that the enumeration of match timbers would be a large and expensive undertaking. The species said to be suitable are many and I know of no reason to doubt the accuracy of this part of the report, which is after all a specialist's work. The species named by the match expert include some suitable for timber but most of them are only used for fuel.

4. The forests of the province are being worked now so as to make the largest possible amount of material available for industry of all kinds from accessible areas, consistent with their restocking with species suited by the climate and locality. Many people seem to be ignorant of the fact that trees cannot be forced to grow in climates and localities which are unsuitable to them. Mr. Ghose has mentioned some of the localities which are being less heavily worked either on account of inaccessibility or because there is

less local demand. In the former category may be mentioned the north-east and higher part of the Kalimpong Division and the north-east of the Kurseong Division, and in the latter a good deal of the Buxa Division (for kukat species, now that the Buxa Timber and Trading Company has gone into liquidation) and much of the forests of the Chittagong Hill Tracts. Most of the other forests are heavily worked for woods which are suitable for the match industry and among them the Sundarbans must be included. In the latter although genwa is already being largely used for matches it is being obtained each year with more difficulty as there is no regulation in its cutting. Paragraph 60 of the 1922-23 Annual Report gives figures of the outturn of timber in the circle.

5. Provided that the demands of those interested in the industry are reasonable, the help which Mr. Ghose hopes for from the Forest Department at the bottom of page 51 of his report will be forthcoming but funds will be needed for opening up inaccessible areas and replanting areas cut over. Special royalty rates do not appear to be necessary to a well-protected industry—the figures on pages 44-45 corroborate this—nor can such be hoped for if money has to be found by Government for the further development of the forests.

Attached are the opinions of two Divisional Officers (Darjeeling and Kurseong).

Opinion of E. A. C. Madder, Esq., Deputy Conservator of Forests, Darjeeling Division.

The writer of this bulletin has unfortunately ignored the fact that there is a heavy local demand for all classes of forest produce in some of the forests visited by him. For example, I fail to see the object of including certain portions of Darjeeling Division, such as Ghumpahar Range, where we cannot meet the existing local demand or of suggesting a splint factory at Sonada when every stick in Senchal 4 is required for the firewood and timber supply of Darjeeling.

2. There are, however, certain areas where timber for making matches is available, but it will be advisable for those interested to first consult the Forest Department as to the quantity of timber that can be spared for matches, after meeting local demand.

3. On page 54 it is stated that there is an abundance of match wood in the Bengal Forests and that a different forest policy is needed to remove all doubts and difficulties in the way of supplying match woods.

Mr. Ghose has conveniently closed his eyes to the fact that a very large number of species mentioned by him are used locally and often in very large quantities.

As regards a change of policy does he suggest that the local inhabitants and local industries should be deprived of the fuel and timber they have been accustomed to purchase from the forests for years and that all timber suitable for matches be reserved for this purpose regardless of local requirements?

4. I do not think any change of policy is needed by the Forest Department: what is wanted is that those interested in the match industry must realise that the requirements of the local inhabitants and local industries must come first. Had this been realised and had those interested in the industry been prepared to work in areas where produce is available, instead of persistently and deliberately trying to plant themselves in forests where the existing local demand exceed the supply, matters would have progressed at least a little by this.

5. On page 30, Mr. Ghose states that most of the species suitable for matches come under the category "Kukat * * * *Kukat, he says, is used as fuel and some Kukat has even no fuel value.

Again on page 17, it is stated "Specimens that have much timber value * * have not been included in this report."

A glance at the results of the timber tests given on pages 18 to 28 will show that the above two statements are misleading and inaccurate. Some or the species mentioned are valuable timber trees, *e.g.*, Gamhari, Lampati, Kawla, Lepcha Kawla and the Sundarbans Pussar. Speaking generally, there is a fairly good demand for at least 25 of the 99 species mentioned for timber. Samples of 16 specimens from Darjeeling Division have been tested (see pages 23 to 25). Eleven of these 16 are sold as timber at present in accessible areas. I am inclined to think that the percentage is nearly as high in a few other divisions.

6. The terms "good supply," "fair supply" and "small supply" used on pages 32 to 37, when estimating the approximate quantity of timber of each species available, must not be taken too seriously; in fact, they are often misleading. For example, under "good supply" we find—

- (1) Hemlock (Thingre Salla) extending over a few hundred acres in the Darjeeling Division.
- (2) Chipit extending over many hundred of miles in the Chittagong Hill Tracts.
- (3) Geneva which is not uncommon over 3,000 square miles in the Sundarbans Division.

7. On page 54, it is suggested that the Forest Department should reduce royalty rates for timber for matches. On page 45 Mr. Ghose estimates that after paying 3 annas royalty plus 6 annas felling and carriage—9 annas, a very fair rate, there will be a minimum profit of Re. 1 per gross of matches. On page 44 it is stated that 1 cubic feet will produce matches for about 3 gross boxes. Six cubic feet will yield about 100 gross cases.

Our royalty rates for the class of timber required are, on the whole, not high, and unless the produce is to be given as a gift, I fail to see why there should be a reduction except in special cases.

My No. 254—17-26, dated the 2nd October 1923, on Mr. Sailendra Nath Mittra's application may be of use in working out the royalty rates that should be charged in this division at least.

8. As regards setting aside special areas for match-making and planting suitable species, there should be no trouble or objection provided local industries and the local demand is adequately safeguarded.

सत्यमेव जयते

Opinion of W. E. Hodge, Esq., Deputy Conservator of Forests, Kurseong Division.

Page 9.—Splint factories.—All produce in accessible places is sold to tea gardens for box planking or fuel. Small parts of tops, etc., are cut into fuel.

Water-supply.—It is doubtful if the water-supply is sufficient at Sukna or Latpanchar. This difficulty could be obviated by installing oil engines.

Floating.—It is very doubtful if floating is feasible in the Teesta.

Labour supply.—I think that Mr. Ghose does not fully appreciate the difficulty of getting labour at Sukna or Sevoke. In the former place there is a fair supply of hill labour which comes down from Tindharia, etc., and goes back at night.

This form of labour is very expensive not only from the point of view of short working hours, but owing to competition with the tea gardens, who can afford to pay very high rates during the plucking season.

In the latter place there is no local labour available and hill coolies for the cold weather months only can be obtained.

In the hills labour for Latpanchar and Mana will also be difficult. It will probably be necessary to open out villages within the forest to provide

labour if anything on a large scale is to be done. Labour will be needed for the extraction as well as the splint making.

Timber supply.—At Toong and Sukna and also in the Bagdogra Range practically all timber is sold to tea estates as box planking or fuel: it hardly seems possible to take produce from an established industry to give it to one that has only just started. In my opinion we should try and get the match people to work at the Latpanchar and Mana and perhaps in some place at the foot of the hills between Sukna and Sevoke, but only in the latter if they can get people to work there.

Enclosure No. 2.

Extract from Department of Agriculture and Industries letter to Director of Industries, Bengal, No. 5461, dated 11th November 1925.

* * * * *

2. The recommendations made by Mr. Ghose for the development of the Match Industry in Bengal have been summarized in Chapter VII of the report. These recommendations so far as they refer to Government may be classified broadly into two groups:—

- (1) those concerning the Forest Department, and
- (2) those concerning the Industries Department.

The recommendations which directly concern the Forest Department are as follows:—

- (1) Formulation of a definite forest policy which would once for all remove all doubts and difficulties in the way of supplying matchwood.
- (2) In areas recommended by Mr. Ghose as suitable for the erection of match factories plantations of the species which are suitable for match wood, as mentioned by him, in respect of each particular locality.
- (3) Conservation of particular species suitable for matchwood purposes
- (4) Conservation of particular forest areas for the above purpose.
- (5) Granting of special royalty rates.
- (6) Granting of special facilities and help from the Forest department, including guarantees of specific quantity and quality, sustained supply from particular areas and divisions and utilization of the forest staff for this purpose.

The recommendations which directly concern the Industries Department are the following:—

- (1) Obtaining concessions of freights from the railway and steamer companies for raw materials and finished goods.
- (2) Granting loans or subsidising in some shape.
- (3) Buying local products for Government or State use.
- (4) Retaining the enhanced import duty on all foreign matches so as to serve as protection and not enacting to levy any tax on local manufacture.
- (5) Reducing the import duty on chemicals and other raw material for matches.
- (6) Giving general technical advice.
- (7) Starting model match-making factories.

3. As regards the recommendations which concern the Forest Department, I am to enclose herewith for your information a copy of the letter

No. 1473—IT-27, dated the 20th March 1924, from the Conservator of Forests, and its enclosure, containing his considered opinion on the subject. The Forest Department are on the whole prepared to accept these recommendations as guiding factors in dealing with any application made to them by individuals for the purpose of obtaining a supply of wood for match making provided that the establishment of a factory for any branch of the match industry does not interfere with the supply in any particular locality for purposes of fuel wood or wood for tea boxes, etc. It is already the accepted policy of the Forest Department to make regular plantations of many of the species which are mentioned by Mr. Ghose as suitable for the industry, as some of them are also required for the purpose of fuel wood, etc. They, however, cannot undertake to make plantations specially of species which are useful for match purposes only but not for other purposes unless they are satisfied that the industry is likely to be developed in a particular area. The same remarks also apply to Mr. Ghose's recommendation for the conservation of certain particular species and certain forest areas for the purposes of match wood. In regard, however, to the recommendation for special royalty rates, the Forest Department would not entertain any application for any reduction in areas where the supply of wood was barely equal to the demand but would be prepared to allow reduced rates, at least temporarily in order to secure new business and to develop new areas for which there was at present very little demand. Such concession has already been allowed in the case of the Bande Mataram Match Factory.

4. With regard to the recommendations which affect the Industries Department, I am to say that so far as item 6 of the recommendations regarding the rendering of general technical help, mentioned in paragraph 2 above, is concerned, Government are prepared to give such help whenever required. As a matter of fact, this kind of help is being rendered at present by the Industries Department. As regards items 1 and 3 of the recommendations which relate to railway and steamer freight concessions and State patronage of the products of the local manufacture, I am to state that Government would be prepared to consider each application on its merits. Item 2 of the recommendations regarding the granting of loans or subsidies can only come up after the proposed State aid to Industries Bill has been passed. As regards items 4 and 5 of the recommendations dealing with import duties I am to say that these are matters which concern the Government of India and that the Government of Bengal are not required at present to take any action in regard to them.

5. As regards the recommendation for the starting of model match factories you considered the possibility of the establishment of an up-to-date match factory capable of producing 1,000 gross boxes per day on the lines suggested by Mr. Ghose in the report and raised the question as to whether Government were prepared to accept in principle the desirability of establishing a demonstration splint factory at the cost of the State. What you, however, evidently intended was the establishment of a self-contained demonstration factory as the starting of a model splint factory would be quite useless unless there were some finishing factories to take over the products of the former.

The match industry is undoubtedly one of great importance, but it is already in existence in this province. It appears that the Industries Department have already undertaken a considerable amount of research work in connection with the industry, e.g., as regards damp-proofing and on the completion of the new research laboratory buildings already taken in hand the department will have facilities for undertaking any further chemical research that is required. It also appears that experiments in splints and woods have been made in one of the existing factories. In the circumstances, it does not appear that there could be much utility of starting a model factory unless it is intended to demonstrate the commercial possibilities of match-making. But the possibilities of making the industry commercially successful depend very largely on wood supply and the position of the factory as regards the unfettered supply of wood and labour and it is obvious that a Government factory in one spot would not necessarily demonstrate the com-

mercial possibilities of a factory in another spot. Apart from this consideration Government feel doubtful as to the soundness of the policy of demonstrating the commercial possibilities of a big factory at the present stage and it is evident that only a big factory will pay. Moreover, the establishment of a self-contained factory cannot help the cottage industries unless it is able to build up subsidiary industries of splint and box making and confine itself to the finishing, but in that case all its own machinery being on too large a scale will be useless. In order to help the cottage industries such a factory would also have to be situated in the middle of populated country where the home industry can flourish, and the slopes of Senehal hills where you suggest the erection of a demonstration factory would be unsuitable for this purpose.

6. In the circumstances explained above, Government are of opinion that there is no scope for the establishment of a self-contained match factory on the lines recommended by Mr. Ghosh. They are, however, prepared to consider any practical proposals for the encouragement of the match industry in Bengal, especially as a home industry. I am accordingly to request that you will be so good as to examine the matter from this point of view and to submit definite proposals, if any, for the consideration of Government in due course. It is understood that the Government of Bihar and Orissa in the Industries Department have started a scheme for the development of the match industry in that province and I am to request that you will be good enough to obtain details of the scheme for consideration in connection with any proposals which may be put forward.

* * * * *

Enclosure No. 3.

Statement giving detailed information on the various points referred to in paragraph 3 of the Tariff Board's letter under reply.

A. (1) (i) and (ii).—*Vide* pages 17—28 of Mr. Ghosh's report and letter No. 1473-1-T.-27, dated 20th March 1925, from the Conservator of Forests, Bengal.

(iii) Wood for the manufacture of packing cases is available anywhere where wood for matches is also available.

(2) *Vide* pages 29—37 of Mr. Ghosh's report.*

(3) For any factory situated near a forest where wood is obtainable in sufficient quantities for matches wood for burning as fuel would also be available. Only a small proportion of the Bengal forest trees are suitable for anything else except fuel. But near towns or thickly populated areas there is a local demand for fuel and the supply would not be unlimited and as Mr. Ghosh says on page 52, it might be necessary to burn coal.

Mr. Ghosh's report gives rates for all classes of timber and presumably the cheapest rates apply to log required for fuel. It is impossible to give estimate of the cost of fuel and the quantities available for fuel for the whole of Bengal in more detail than Mr. Ghosh has done.

(4) Generally speaking labour is plentiful with all factories which have been established for some time; but some concerns, particularly those which have Jute or Cotton Mills as neighbours, complain of fluctuation due to employees being reluctant to remain for a short time with comparatively low earnings in order to gain sufficient skill to earn more. In common with other industries some of the smaller concerns experience difficulty in obtaining labour during the harvesting period, but this difficulty is not so great as it might be since this period coincides with the off seasons of the match industry. Some of the larger concerns have now installed Box Filling Machines

so that child labour hitherto taking care of that portion of the process have now come into the market for similar employment in smaller capitalised factories.

In so far as future small match factories are concerned, there should be no difficulty in obtaining the requisite child labour in view of the attraction to the latter being able to earn comparatively high wages.

MATCH FACTORY: WAGES: (Average per month).

BOX FILLING DEPARTMENT.

Children (12 to 15 years)	Rs. 20-0-0 (6 hours per day, 6 days per week).
Men	Rs. 22-8-0 (10 hours per day, 6 days per week).
Women	Rs. 25-0-0 (10 hours per day, 6 days per week).

In the larger European Match Factories box filling to a great extent is carried out by machines so that few persons are employed in that branch of the process.

BOX MAKING DEPARTMENT (by hand).

Children	Rs. 26-0-0 (Contract) (6 hours per day, 6 days per week).
Men	Rs. 26-0-0 (Contract) (10 hours per day, 6 days per week).
Women	Rs. 26-0-0 (Contract) (10 hours per day, 6 days per week).

The larger concerns do this work either by machines or arrange to get it done by contract workers working in their own homes.

BOX MAKING DEPARTMENT (by machine).

Men	Rs. 28 (daily hands) (10 hours per day, 6 days per week).
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DIPPING DEPARTMENT.

Men	Rs. 28 (daily hands) (10 hours per day, 6 days per week).
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FRAME FILLING DEPARTMENT.

Men	Rs. 40 (daily hands) (10 hours per day, 6 days per week).
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PEELING MACHINE DEPARTMENT (veneers).

Men	Rs. 35 (daily hands) (10 hours per day, 6 days per week).
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STICK PEELING DEPARTMENT.

Men	Rs. 35 (daily hands) (10 hours per day, 6 days per week).
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STICK CUTTING DEPARTMENT.

Men	Rs. 28 (daily hands) (10 hours per day, 6 days per week).
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B. (1) *Vide* pages 38-41 of Mr. Ghosh's report.

Maps illustrating the sites mentioned in the report not available.

(2) It is understood that a detailed statement showing the number, location, size of factories in Bengal, including those working on cottage industry lines, and the approximate date of establishment of each factory has already been furnished to the Tariff Board by the Director of Industries, Bengal. A list of registered factories in Bengal, as now furnished by the C. I. F., Bengal, with such details as are available is enclosed herewith.

(3) It is understood that a statement on this point has been forwarded to the Tariff Board by the Department of Industries, Bengal, direct.

(4) With the exception of Khulna and Calcutta no match factory of any magnitude has been started in any other place recommended either in Mr. Troup's memorandum or in Mr. Ghosh's report.

(5) None of the factories mentioned in the list referred to in B above have been closed, except the Supramantosh Match Factory which was closed for the reason stated therein.

(6) Of the 14 registered factories mentioned in the list one is owned, controlled and managed by Japanese, one is owned, controlled and managed by Swedes and the rest are Indian owned, controlled and managed.

C. (1) Almost all the factories are located in or near about Calcutta. The only arrangement that has been made for the sale of trees from Darjeeling forests (Senchal Block II) to the match industry is that with Babu Sailendra Nath Mitra, Proprietor of the Bande Mataram Match Factory, by which he has been permitted to remove from coupes in the same felling series before they are sold by auction, trees suitable for match-making, paying royalty at the ordinary scheduled rates.

(2) One anna per cubic foot for match wood to be taken from the Darjeeling forests (Senchal Block II) with effect from March 1927.

(3) *Vide* reply to C (1) above.

(4) As no such applications have so far been received by Government, the questions do not arise.

(5) *Vide* paragraph 3 of this department letter No. 5461, dated 11th November 1925.

(6) No.

D. *Vide* Appendices II and III to Mr. Ghosh's report.

E. and F. The figures relating to the import of matches into Bengal as per statement enclosed and those relating to the estimated production of the local factories as shown in the detailed statement which has been furnished to the Tariff Board direct by the Director of Industries, Bengal, will furnish an idea of the extent of local demand for matches and also the stage the industry has reached in Bengal.

Number of registered match factories in Bengal—14.

<i>Location.</i>	
Calcutta	1
24-Parganas	12
Khulna	1

Calcutta.

<i>Name of factories.</i>	<i>Employees approximately.</i>
1. Esavi India Match Manufactory	601

24-Parganas.

Name of factories.	Employees approximately.
1. Calcutta Match Works	890
2. Western India Match Factory	914
3. Esavi India Match Factory	946
4. Supermantosh India Match Factory	Closed for past 12 months since fire took place.
5. Pioneer Match Factory	400
6. Radha-Shyam Match Works	63
7. Karimbhoy Match Manufactory	275
8. M. N. Mehta Match Factory	756
9. Sukalu Match Factory	33
10. Sultan Central Match Works	19
11. Standard Match Works	49
12. Bhagirathi Match Factory	125

Khulna.

1. Sunderban Match Works	39
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Name of factories.

Date of Establishment.

Calcutta.

1. Esavi India Match Company's Factory, 36-A, Hogulkuria Gully	January 1925.
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24-Parganas.

1. Calcutta Match Works, Dilwarjah Lane, Garden Reach	October 1924.
2. Western India Match Company's Factory, 46-5, Canal East Road	September 1924.
3. Esavi India Match Manufactory, 46, 46-1-1, Muraripukur Road	January 1925.
4. Supermantosh and Company's Match Manufac- tory, 25, South Road, Entally	January 1925.
5. Pioneer Match Factory, 16, Dum Dum Road	June 1925.
6. Radha-Shyam Match Works, 10, Roy Mathura- nath Chowdhury's Lane, Baranagore	August 1925.
7. Karimbhoy Match Manufactory, 32, Canal West Road	August 1925.
8. M. N. Mehta Match Factory, 104, Ultadinghi Main Road	October 1925.
9. Sukalu Match Factory, 14, Gurudas Datta's Garden Lane	November 1925.
10. Sultan Central Match Works, 35-5, Canal West Road	December 1925.
11. Standard Match Works, 13, Paikpara Road, Tallah	April 1926.
12. Bhagirathi Match Factory, 1, Jogan Bysack Road, Barnagore	November 1926.

Khulna.

1. Sunderban Match Works, Khulna	June 1925.
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Matches.	Quantity in gross of boxes.					Value in Rupees.				
	1920-21.	1921-22.	1922-23.	1923-24.	1924-25.	1920-21.	1921-22.	1922-23.	1923-24.	1924-25.
Safety	2,879,961	3,968,839	3,268,417	3,092,587	2,157,211	42,06,338	61,60,748	44,72,802	47,49,112	30,90,761
Other sorts	62,047	12,500	87,481	39,409	79,909	1,08,513	26,578	1,03,913	54,875	1,37,648
TOTAL MATCHES .	2,942,008	3,981,339	3,355,898	3,041,996	2,236,120	43,14,851	61,87,326	45,76,715	48,03,987	32,28,409

Match-making materials (at the Calcutta port).	Quantity in lb.					Value in Rupees.				
	1920-21.	1921-22.	1922-23.	1923-24.	1924-25.	1920-21.	1921-22.	1922-23.	1923-24.	1924-25.
Undipped splints	319,190	...	...	...	...	71,861
Veneers for match boxes and empty boxes.	705,132	...	...	...	...	2,71,812
TOTAL	1,024,322	...	...	...	...	3,43,673

Government of the Punjab.

Letter, dated 24th February 1927.

With reference to your letter No. 58, dated 8th January 1927, to the address of the Chief Secretary to Government, Punjab, I am directed to forward herewith a copy of a joint note on the Match Industry in the Punjab written by the Director of Industries and the Chief Conservator of Forests, Punjab, which deals with all the points raised by the Board.

2. With reference to paragraph 4 of your letter under reply I am to say that if the Board could give an indication after a perusal of the enclosed joint note as to the approximate date of their visit with the places to be inspected, necessary suggestions for a tour programme will be forwarded.

The Match-making Industry in the Punjab.

(A note compiled with special reference to the Secretary, Tariff Board letter No. 58, dated 8th January 1927, to the Chief Secretary to the Government of the Punjab.)

(*Vide* Secretary, Development Department, Punjab's endorsement No. 423-A.D., dated 27th January 1927, to the Chief Conservator of Forests, Punjab.)

General. (Last sentence of paragraph 2 of the Tariff Board's letter.)

The present condition of the match-making industry in the Punjab cannot be described as flourishing; but there is little, if any, reason to despair provided that it is recognised that the building up and growth of the industry depends:—

- (i) On ready co-operation between the Punjab and its neighbours, the Kashmir, Chamba and Bashahr States;
- (ii) On reasonable protection against the unduly cheap marketing of foreign matches or matches manufactured from foreign wood in India by powerful foreign match companies and combines;
- (iii) On the grasping of every favourable opportunity to improve communications and cheapen transport with the forests of the higher hills, which contain a very large supply of wood believed to be suitable for match making.

At the moment there is only one match factory in the Punjab—The Mahalakshmi Match Factory at Shahdara, near Lahore, owned and operated by Sir Daya Kishan Kaul and Sons. This factory is equipped with up-to-date and efficient machinery and is conducted with sufficient expert knowledge of match making; but it is handicapped by the fact that it was erected without adequate consideration of the difficulty of obtaining, near Lahore, a sufficiency of cheap wood suitable for match splints and box veneers. It should at once be made clear that this factory was started without consultation with the Forest Department, who cannot, therefore, take any responsibility for the difficulties in which the factory now finds itself. The factory continues to work by buying blue pine (*Pinus excelsa*) wood in the open market and supplementing supplies of this wood by small quantities of other woods, chiefly the Hill Poplar (*Populus ciliata*) and the riverain Poplar (*Populus euphratica*): but Blue Pine wood is in reality too valuable a wood for match splints (though entirely suitable for box veneers), while the other 2 woods cannot be had in sufficient quantities or of good enough quality at present. The prospects of the match-making industry in the Punjab are sufficiently good, provided that it is recognised that development must, by the condition of things, be slow and must involve the investment of capital on a considerable scale.

The Forest Department's views on the prospects are set forth in general terms in a note entitled "Note on the possibilities of establishing a Match Industry in the Punjab" issued by the Utilization Circle, with the approval of the Chief Conservator of Forests, Punjab, a copy of which is attached (Enclosure I).

The Forest Department believes that a real development of this industry depends on the utilization of the large quantities of Silver Fir and Spruce wood growing in the remoter parts of the High Hills. But, since it is clear from actual experience at the Mahalakshmi Factory that these 2 woods are not suitable for "peeling" when the sap has been dried out after transport by water over long distances, the development of the industry will, it is believed, depend upon the preparation of splints in special splint factories erected in the close vicinity of the Silver Fir and Spruce Forests, and transfer of the manufactured splints from these factories to the plains, where the finished match would be produced at a central factory, located at a spot, where packing case and box veneer material, chemicals, and paper can be obtained in sufficient quantities at reasonable cost. But development on these lines is very largely dependent upon improved communications, since the cost of transport of "splints" must be as low as possible if a match is to be produced at a competitive price. In practice it would appear that the industry must be started on a small scale, utilizing such accessible forest areas as there may be at present, and gradually expanding as improved communications and cheap transport enable fresh forest areas to be exploited for match wood. Nor must it be forgotten that but a small proportion of the supply of Silver Fir and Spruce wood, available in Northern India, actually lies within the boundaries of British Punjab; the proportion is probably not more than 10 per cent. of the whole, while Chamba (10 per cent.), Bashahr (10 per cent.) and Kashmir (70 per cent.) all contain forests which could provide these woods to a large central finishing factory situated in the Punjab. Such a factory, given patience and time, might provide for the whole of the match demand of Northern India (Punjab, United Provinces, North-West Frontier Province and the Native States adjoining).

Sources, etc., of wood supply. (A (1) of Tariff Board's letter.)

The following woods in the Punjab are believed to be suitable for match making:—

Silver Fir (<i>Abies Pindrow</i>)		For splints (when green) and packing
Spruce (<i>Picea morinda</i>)		cases.
Blue Pine (<i>Pinus excelsa</i>)		For splints and box veneers.
Hill Poplar (<i>Populus ciliata</i>)		For splints.
Riverain Poplar (<i>Populus euphratica</i>)		For splints.
Simal (<i>Bombax malabaricum</i>)		For box veneers.

The Punjab Government only owns one important area of Silver Fir and Spruce forests, namely that lying in the Kulu and Seraj Forest Divisions. These forests can produce at least 1 million cubic feet of match wood annually in perpetuity, but without improved communications they are economically inaccessible to the match manufacturer, since the wood must be used green.

Subject to the qualifications as to accessibility there is a further supply in the North-West Frontier Province Government forests of Hazara District, which could yield probably another 750,000 cubic feet per annum (of which some 50,000 cubic feet may prove to be immediately accessible). The forests of Chamba State contain another million cubic feet, but are unlikely to be economically accessible for many years to come, the same remarks applying to the forests of Bashahr State (which will give another million cubic feet per annum). The Kashmir State will produce some 5 to 6 million cubic feet per annum, of which probably 1 million cubic feet could be exploited immediately. The visible supply of Silver Fir and Spruce wood in the north of India, utilizable by a Punjab Match industry, is therefore round about 9-10

million cubic feet per annum, of which however probably a little more than 1 million cubic feet are at present economically accessible for match splints; while probably 1 million cubic feet more could be produced from Kulu and Seraj forests for packing cases, since water-borne wood is suitable for this purpose.

The Blue Pine is available in considerable quantities but has a value which places it beyond the reach of the manufacturer of matches on a large scale, except for box veneers. The Punjab Government forests would certainly produce 50,000 cubic feet of wood a year suitable for this purpose and immediately available (since water-borne Blue Pine wood is suitable). The other localities mentioned above will produce 5 or 6 times this quantity so that there is no question that sufficient quantity of this wood is available for box veneers for the largest factory.

The Hill Poplar is not at present found in large enough quantity in concentrated areas to allow of sole dependence upon this wood by a factory. However even at present it might prove a useful source of supplementary supply: while it is possible that plantations of this tree could be grown in suitable localities without very great difficulty.

The Riverain Poplar is at present found in considerable quantities only along the Indus river in the Muzaffargarh and Dera Ghazi Khan Districts. The present stocking of the forests is extremely poor owing to past neglect, and the production of wood suitable for match making does not exceed 10,000 cubic feet for annum. Steps are now being taken to improve the quantity and quality of wood in these forests, and it is possible that after some 20-25 years the supply of wood will gradually increase to a maximum of 75,000 cubic feet per annum. It is also possible that the supplies of this wood could be considerably increased by plantations in riverain areas, or even in parts of the irrigated plantations of the Punjab.

The Simal does not at present form large forests in the Punjab so that no large quantities of this wood are at present available for box veneers. It is just possible that supplies of this wood could be increased by planting.

Proximity and accessibility of supplies. (A (2) of Tariff Board's letter.)

Information on this point has been included in the preceding section. To sum up it can be said that supplies of the most abundant woods, namely, Silver Fir and Spruce, depend entirely on improved communications. These 2 woods could not be obtained in full quantity from a single source; the position is summarised as follows for these 2 woods:—

Silver Fir and Spruce.

Source.	Ultimately available.	Now available.
	C. ft.	C. ft.
Punjab (Kulu, Seraj)	1,000,000	..
North-West Frontier Province (Kagan)	750,000	50,000
Chamba State	1,000,000	..
Bashahr State	1,000,000	..
Kashmir State	6,000,000	1,000,000
TOTAL .	9,750,000	1,050,000

The blue pine forests are all accessible by river and subject to cost, (which is to-day round about 12—14 annas per cubic foot in the log), are in sufficiently close proximity for use in a plains finishing factory for box veneers.

The Riverain poplar forests are the only other immediate source of supply and are concentrated in 2 neighbouring districts in the South West Punjab. Supplies are at present limited, but will increase. The forests are all accessible and are in close enough proximity to any locality likely to be used for match manufacture.

Fuel supply. (A. (3) Tariff Board's letter.)

The fuel woods available in the plains are Shisham, Mulberry, *Jhand* and *Farash*, the 2 former growing in irrigated plantations and the 2 latter in the dry rakhs. Supplies from dry rakhs will rapidly decrease with the advance of irrigation. There will always be ample supplies of fuel for match factories in the plains at a cost of approximately 10 per cent. c. ft. stacked for *Shisham* and mulberry and Rs. 6 per cent. c. ft. stacked for *Jhand* and *Farash*. For splint factories in the Hills there will be ample supplies of fuel in the form of waste wood from conversion, branch wood, etc., at a cost of some 4 annas per maund.

Available supply of labour and wages. (A. (4) of Tariff Board's letter.)

The Mahalakshmi Match Factory experiences no difficulty in getting an adequate supply of labour. The whole process of match manufacture, from the sawing of the logs to the packetting of finished products requires a certain amount of skill, which is not difficult to acquire. The labour employed in the factory consists of:—

Skilled 137 men and boys, working on machines.

Wages range between Rs. 8 and Rs. 25 per mensem according to qualifications and age.

Skilled 12 mechanics, mistries, fitters, etc.

Wages range between Rs. 15 and Rs. 80 per mensem.

Unskilled 35 men working in the timber yard, stores and for transportation of finished products.

Wages range between Rs. 20 and Rs. 25 per mensem.

Match Factory sites. (D. (1) of Tariff Board's letter.)

Mr. Troup has mentioned Beas and Ghazi Ghat as 2 possible but not promising sites for match factories. Beas is not suitable in view of the fact that sufficient supplies of *cheap* wood for splints would not be available, owing to the more or less established fact that Silver Fir and Spruce timber when carried long distances by water is not suitable for match splints; the site is by no means the most suitable for a central finishing factory. At present at any rate Ghazi Ghat is not suitable for a factory, since present supplies of wood are insufficient to feed even the smallest factory. In fact an investigation carried out in 1909-10 by Messrs. Macbeth and Monro proved this to be the case: the position has not yet sufficiently improved to permit of revision of their decision. After the lapse of some 20 years it is possible that the supply of suitable wood will have sufficiently increased to justify the erection of a "Splint" factory at this place.

For reasons already stated the Forest Department advocates a Central Finishing Factory to which prepared "splints" would be sent from special splint factories, located in the neighbourhood of the forests growing suitable "splint" wood. There will be no objection however to "splint" machinery at the Central Factory on a small scale to deal with such quantities of suitable woods as can be economically obtained but not in large enough quantities for any one locality to justify the erection of a splint factory *in situ*.

Probably Lahore is a quite suitable locality for the Central Finishing Factory, which will deal with the chemical side of the industry, making of packing

cases, making of match boxes, making of splints on a small scale, and labelling and packing. Such a factory must be on a main line of railway, as near as reasonably possible to ports, admitting the necessary chemicals, etc., and yet not unduly far from the centre of the wood producing areas—Lahore fulfills this purpose sufficiently, so that the Mahalakshmi Factory may be considered to be satisfactorily located.

Splint factories could almost certainly be established immediately in the Vale of Kashmir where supplies of Silver Fir and Spruce wood are unusually accessible. No details can however be given by the Punjab Forest Department as to the number and location of such factories.

Lack of communications at present limits the possibility of establishing splint factories elsewhere: but it is believed that a factory would be justified at Balakote at the foot of the Kagan Valley in Hazara District and possibly also above Shinkiarri in the Siran Valley of the same district. An extension of rail facilities to the borders of or on to Kulu coupled with good cart roads would open up a possibility of 2 more splint factories, probably located at (1) Bhuin (at the junction of the Beas and Parbatti Rivers), and (2) above Monali at the head of the Beas River. Other factories in the High Hills are out of the question unless good communications are established, and there seems little immediate prospect of such a development in Chamba and Bashahr States in the near future. As already stated a splint factory at Ghazi Ghat may prove feasible 20 years hence.

Number, etc. of Match factories in the Punjab. (B. (2) of Tariff Board's letter.)

The only match factory in the Punjab is the Mahalakshmi Match factory (proprietors—Sir Daya Kishen Kaul and Sons) located at Shahdara, near Lahore, started in 1925 and equipped with modern machinery of German make. It is understood that a splint factory subsidiary to this Central factory has just been erected in Kashmir State to utilise a concentrated area of poplar (*populus alba*) forest which is the property of Sir Daya Kishen Kaul: but no particulars are available in the Forest Department. The factory at Shahdara is at present designed to deal with 1,000 gross boxes of matches daily, but is at present believed to be working at about $\frac{2}{3}$ of its full capacity owing to lack of wood. The factory started work in 1925.

Utilization of indigenous wood. (B. (3) of Tariff Board's letter.)

Owing to (1) difficulties of extraction, (2) lack of communications with the important sources of Silver Fir and Spruce wood supply and (3) the dearth of wood, other than Silver Fir and Spruce, suitable for match making, the Forest Department has not yet been able to supply large quantities of wood for the manufacture of matches. The following statement gives the necessary statistics on this point:—

Kind of wood.	Quantity sold.	Price per cubic foot solid realised.	Cost per cubic foot solid of extraction.
	C. ft.	Rs. A. P.	Rs. A. P.
Riverain Poplar	17,000	*0 3 0	0 1 5
Blue pine	12,903	0 12 9	0 10 0
Fir	1,666	0 6 9	0 14 0

*Price for firewood and match logs combined works out at approximate 2 annas per c. ft. solid. This figure has been raised 50 per cent. for match logs alone.

Erection of factories on Mr. Troup's sites. (B. (4) of Tariff Board's letter.)

No match factories have been erected on the sites contemplated by Mr. Troup for reasons already explained.

Closure of factories owing to financial losses. (B. (5) of Tariff Board's letter.)

No match factories in the Punjab have so far been closed owing to financial losses: but unless conditions governing the supply of Silver Fir and Spruce wood can be improved (chiefly by means of improved communications with the Inner Himalayan forests), the position of any Match factory in the Punjab must remain precarious.

Foreign capitalists and the Match Industry. (B. (6) of Tariff Board's letter.)

No Match factories in the Punjab are owned or controlled by foreign capitalists.

Arrangements for sale of wood from Government forests. (C. (1) of Tariff Board's letter.)

Wood is purchased by the Mahalakshmi factory in the open market, either at auction or at rates based upon prices realised by sales of similar wood at auction, from the Government depôts.

Restrictions on concessions to foreigners. (C. (4) of Tariff Board's letter.)

The royalties on wood sold by the Punjab Forest Department to the Mahalakshmi Match Factory have been approximately as follows:—

- (i) Blue Pine (*Pinus excelsa*) 1 anna per c. ft.
- (ii) Silver fir (*Abies pindrow*) and Spruce sold at a loss.
(*Pices morinda*).
- (iii) Riverain poplar (*Populus euphratica*) . . . 1 anna per c. ft.

Concessions for extraction of wood. (C. (3) of Tariff Board's letter.)

No concessions have so far been granted.

Restrictions on concessions to foreigners. (C. (4) of Tariff Board's letter.)

The question has not so far arisen in the Punjab so that no general policy has as yet been formulated.

Plantations for production of Match wood. (C. (5) of Tariff Board's letter.)

No plantations of this nature have so far been formed in the Punjab for production of wood, suitable for match-making. In the event of a successful development of the resources of Silver Fir and Spruce, such plantations on a large scale would hardly be necessary as ample supplies of these woods exist to meet all possible demand for matches in Northern India. Some experiments are, however, about to be undertaken to see whether the supplies of riverain poplar (*Populus euphratica*) and Simal (*Bombax malabaricum*) can be increased by planting on an economic basis.

Plantations by manufacturer of matches. (C. (6) of Tariff Board's letter.)

No plantations of this nature have been made in the Punjab.

Conditions and cost of transport. (D. of Tariff Board's letter.)

Road transport in the High Hills is possible between April and December: snowfall stops traffic during December—March. Inundation prevents transport from the riverain poplar forests during the monsoon period.

River Transport of logs is usually carried out in the spring and early summer between the melting of the snow and the flooding of the rivers with the establishment of the monsoon in July-August, some log floating is also done in the autumn commencing before the monsoon begins to subside.

Rail transport is possible at all seasons of the year. The cost of transport can be put at the following rough figures:—

- (i) By ropeway, timber slides, etc. 6 pies per maund per mile.
- (ii) By bridle road (pack animals) . 1 anna per maund per mile.
- (iii) By hill cart road . . . 3 pies per maund per mile.
- (iv) By other cart roads . . . 1½ pies per maund per mile.
- (v) By river ½ pie per maund per mile.
- (vi) By rail ½ pie per maund per mile.

(And 2 pies per maund terminal charges.)

For the Central finishing factory at Lahore methods (i), (iii), (v) and (vi) would be utilised for wood or splints required. For splint factories in the hills methods (i), (ii) and (iii) would be utilised.

Local demand for matches: disposals from local factories. (E. of Tariff Board's letter.)

It is difficult to find out exact figures of consumption of matches in the Punjab, as imports of matches into the Punjab are not separately recorded in the Provincial Trade reports. However, a statement showing the imports into India of matches and the estimated imports into the Punjab is enclosed (enclosure II). The figures for the Punjab have been arrived at on a population basis, i.e., 1/18th of the total Indian imports. The imports for the last two years have considerably decreased. The decrease might be attributed to the establishment of match factories in India. The Shahdara factory which is capable of turning out 1,000 gross of boxes per day is at present producing 750 gross a day. The output during 1925-26 was 95,682 gross of boxes, which represents about 1/5th of the estimated consumption of matches in the Province. The entire output of the factory is disposed of in the Punjab and North-West Frontier Province through agents. The demand is far in excess of what it can possibly turn out.

State which the Match Industry has reached in the Punjab. (F. of Tariff Board's letter.)

The industry is still in its infancy in the Punjab and development must of necessity be slow, depending as it does (i) mainly on the opening up of the inner Himalayan forests by adequate cart road and railway development, (ii) the steady, but necessarily slow improvement of the riverain poplar forests in the S. W. Punjab.

Inspection of Match factories by the Board.

The Mahalakshmi Match Factory can be visited from Lahore at any time on application to Sir Daya Kishen Kaul and Sons, Abbott Road, Lahore: as also the recently erected Splint Factory in Kashmir, by rail and motor from Lahore to Srinagar (2 days' journey).

Enclosure No. I.

Note on the Possibility of establishing a Match Industry in the Punjab.

1. This note is designed to supply preliminary information to the many firms and private individuals who appear to be anxious to establish match factories in the Punjab and elsewhere in India, by using wood from the Punjab forests.

2. There are very large quantities of silver fir and spruce wood in the far distant and not easily accessible forests of the Himalaya proper, notably at the head of the Beas, Sutlej, Chenab and Jhelum valleys—by far the greater part of available supplies being situated in Native States, such as Kashmir (Jhelum and Chenab rivers), Chamba (Chenab and Ravi rivers) and Bashahr (Sutlej river). The forests lie in the heart of the Himalaya proper at a distance by river or by bridle path and cart road of 300 miles or more from the Punjab plains. Both these woods are suitable for packing cases and, under certain circumstances, for match splints. They could be supplied up to a total of some 25 lakhs of cubic feet of logs a year. But the circumstances under which silver fir and spruce are suitable for match splints are an all-important factor, and require detailed expert examination before anyone would be justified in establishing a match factory, depending mainly upon these woods. So far as the limited information in the possession of the Forest Department goes, it can be said that these woods must be put through the splinting machines *green* (that is to say, with the natural sap still in the wood, and that they lend themselves more to conversion into round grooved splints of the "pine vesta" type than to conversion into the more common square splint. At the same time it is possible that experiments with green wood (which have not yet been carried out) may prove that good square splints can be made from such wood. It must be clearly understood, therefore, that it is very doubtful if silver fir and spruce logs carried to the Punjab plains by water will be suitable for any other purpose than packing cases and similar purposes; so that it may prove necessary to arrange for splint manufacture in the vicinity of the forests, and not in the plains. It is clear from the above that very careful calculations of costs, etc., are essential before launching any large scheme of match manufacture in the Punjab.

On the other hand, there are large supplies of kail wood in the same localities to meet the demands of large match factories for match box veneers and splints. For both these purposes, this wood is quite suitable, even after extraction to the plains by water.

3. While it is true that large supplies of wood are available in the forests, it is by no means true that any of these woods can be obtained in the plains, either in a form (see the remarks above regarding silver fir and spruce wood) or at a price which makes their use for match-making a sound commercial proposition. In the case of silver fir and spruce forests, extraction from the forests, and by the rivers, is a very difficult and comparatively expensive operation: nor can costs be reduced without very heavy initial capital outlay on lines of transport (such as ropeways, logging roads and flumes), and on river improvement (to enable logs to be floated out of the higher reaches of the river). Without such capital outlay it is impossible to tap more than perhaps 10 per cent. of the silver fir and spruce forests at all, while so far as limited experience has shown, even in the case of this 10 per cent. it is probably impossible to deliver logs of these timbers in the plains at a cost price figure of less than 9 to 12 annas per c. ft. (this figure including no value for the wood itself). The cost of delivering silver fir and spruce logs at a factory situated in the near vicinity of the forest would probably be round about 4 annas per c. ft. (again this figure includes no value for the wood itself).

The position in the case of kail wood is somewhat more favourable as regards extraction, but the demand for this wood for general purposes is sufficiently keen to give a market value to the wood, which tends to put the wood almost out of the reach of any but the largest and most highly organised match factories. This wood is, to-day, worth some 14 to 16 annas per c. ft. in the log, sold at plains depôts.

4. Apart from the problem of wood supplies, a Punjab match factory would be faced with difficulty in obtaining the requisite chemicals and paper at a reasonable price, since, at present at any rate, India does not produce these requisites in large enough volume or at a price, to enable successful competition with the large match "combines" of Europe and Japan. So real is this difficulty that, even where wood has been obtained in India for match splints and boxes, firms have preferred to sell those unfinished products to the large

European "combines" to be turned into the finished match. For this reason also it follows that none but the biggest scale and most highly organised concern could hope to establish a profitable match factory in Northern India.

5. Even if the difficulties detailed and implied above were surmountable, it cannot be too strongly emphasised that none of the suitable woods could be used at any distance from the river depôts, to which they are brought, owing to the high railway freight chargeable on so bulky a commodity (thus enquiry showed that freight from the Punjab depôts to Patna in Bihar and Orissa would amount to some 14 annas per c. ft.). This, combined with a relatively high initial cost of wood, obviously makes the export of Punjab woods to other parts of India for match-making an entirely uncommercial proposition.

6. Enquirers often ask whether Government will supply wood for match-making purposes at concession rates. The answer to that question must be in the negative, since the Punjab Government rightly holds that a business, dependent upon a permanent Government subsidy, (which is what a concession price, namely one below the market price of the raw material, amounts to) is not to the commercial advantage of the Province. While some temporary subsidy of this nature might conceivably be considered for a limited period during and after the establishment of a match factory, it is useless for enquirers to base any plans upon a price for wood below the ruling market price from time to time, or for them to count upon obtaining a very long period contract with Government for the supply of timber at a fixed price. It may, however, be said that, so far as can be foreseen, it will be many years before the general market price of silver fir and spruce wood will rise to a figure approaching that for kail, so that subject to cost, the purchase price of these woods probably is and will be within the range desirable for match-making, provided the industry is based upon large scale production and a high standard of efficiency.

7. From what has appeared, above, it cannot be advised that any firm or individual should consider the establishment of a match factory except upon a really large scale and upon the most up-to-date and efficient principles; while it is a matter of great practical importance to consider what hope, if any, there is of competing with the powerful "combine," which control the match industry in Europe, or with the low prices at which Japanese firms are prepared to sell in India. Certainly no one would be well advised to commit themselves to any scheme for match-making in the Punjab until they have had the advantage of the best available expert advice from specialists, who have had long and intimate experience of match-making as carried on in Europe and Japan.

8. The Forest Department will always be ready to consider the question of supplies of wood if, and when, a firm or individual can prove that the proposition is based upon a sufficient knowledge of the actual problems to be solved and sufficient financial backing to ensure that large capital outlay in the forests would not be followed by the disappearance of the demand with the disappearance of the match manufacturer. It will readily be understood that nothing but a really large and permanent demand, at a fair price, for the woods, indicated as suitable for match splints, would tempt Government to invest the large capital required to open out the forests.

Enclosure No. II.

Statement showing the imports into India and estimated imports into the Punjab of matches and match-making materials, undipped splints, veneers, for match boxes and empty boxes.

Year.	IMPORTS INTO INDIA.			IMPORTS INTO THE PUNJAB ON THE POPULATION BASIS i.e., 1-13TH OF INDIA.		
	MATCHES.		*MATCH-MAKING MATERIAL.	MATCHES.		MATCH-MAKING MATERIAL.
	Quantity Gross of boxes.	Value. £	Quantity. lbs.	Value. Rs.	Gross of boxes.	Quantity. lbs.
1913-14	13,894,318	597,051	..	Rs.	1,068,794	..
1914-15	15,415,420	753,245	..	..	1,185,801	..
1915-16	18,304,787	922,040	..	..	1,408,061	..
1916-17	11,159,036	771,318	..	..	858,377	..
1917-18	17,236,856	1,565,585	..	..	1,325,143	..
1918-19	11,119,052	1,098,353	..	..	855,312	..
1919-20	15,015,109	2,048,323	..	..	1,155,068	..
1920-21	12,398,733	1,670,137	..	..	953,749	..
		Rs.		Rs.	1,052,369	..
1921-22	13,680,801	2,03,80,469	..	..		..
1922-23	11,285,740	1,61,80,658	..	..	868,134	..
1923-24	11,243,745	1,45,91,813	..	..	864,903	..
1924-25	7,264,785	88,88,611	3,747,368	12,04,348	558,829	..
1925-26	7,928,522	93,45,036	1,154,272	3,91,719	609,886	Probably nil

* Separately recorded from 1924-25. This material is believed to be wholly absorbed in the Bombay Presidency: little, if any, comes into the Punjab.

Government of Assam.

Letter, dated the 25th February 1927.

I am directed to refer to your letter No. 58, dated the 8th January 1927, and to forward a note recorded by the Conservator of Forests, giving the information required regarding the condition and prospects of the match making industry in Assam.

2. Should the Board desire to visit any sites in this province I am to request that this Government may be informed so that arrangements can be made and a tour programme suggested.

Enclosure.

Note by the Conservator of Forests, Assam.

A. (1) The existence, quantity and suitability of wood for the manufacture of—

- (i) splints,
- (ii) veneers, and
- (iii) packing cases.

Only the species which are available in large quantities have been mentioned.

Species.	(i) Splints.	(ii) Veneers.	(iii) Packing cases.
1. Anthrocephalus Cadamba	Yes.	Yes.	Yes.
2. Bombax malabaricum	"	"	"
3. Duabanga Sonneratioides	"	"	"
4. Gmelina Arborea	"	—	—
5. Mallotus philippinensis	—	Yes.	—
6. Pinus Khasya	Yes.	"	—
7. Sterculia villosa	—	"	Yes.
8. Machilus Bombycina	Yes.	"	—

(2) The proximity and accessibility of the source of supply of such materials with special reference to the question whether it would be possible to obtain them from a single source.

Nos. 1 and 8 above can be obtained together from the Manas river to the existing Match factory at Dhubri; the time taken for delivery at the factory is about one month from the time of felling. In other districts the same time would probably be required; but much depends on the depth of water in the streams feeding the Brahmaputra; in many cases the floating would have to be restricted to the months in which the streams were in flood.

(3) The quantity, kind and cost of fuel available.

Ample wood fuel is available, and coal is fairly cheap; wood fuel as a rule would have to be floated down with the logs for the matches; the cost would vary from 2 to 4 annas per 10 maunds. Coal would vary in cost from annas 9 to annas 14 per maund.

(4) The available supply of labour for the factory and the wages of such labour.

Very little local labour is available, and labour would probably have to be imported; cost from annas 8 to Re. 1 per day.

B. (1) The sites (whether included in Mr. Troup's memorandum or not) which are considered suitable for the establishment of match factories in your province and the special advantages of each site.

Place.

District.

1. Kulai . . . Kamrup . Although Mr. Troup included this in his list, I do not consider it suitable at present; but I understand that the proposed railway line from Gauhati on the south bank of the Brahmaputra may go near Kulsi; in which case it may be a very good site.
2. Bilasipara . . . Goalpara . This site is on the Brahmaputra north bank, and is a calling station for river steamers. Floating from the Manas river would be cheaper than to Dhubri. A map indicating the sites is attached.

(2) The number, location and size of the match factories in your province and the approximate date of the establishment of each.

One has been erected at Dhubri, Goalpara district in 1925; the output is said to be 10 cases of 50 half gross packets per day.

(3) The extent to which indigenous wood is utilized in such factories for—

- (a) splints,
- (b) veneers, and
- (c) packing cases.

The use of indigenous timber is still under experiment; *Bombax malabarium* (No. 2) and *Machilus Bombycina* (No. 8) are chiefly being tried both for splints and veneers.

(4) Whether any such factories have been erected on the sites selected by Mr. Troup in the memorandum referred to above.

No.

(5) Whether any such factories have been closed as a result of financial losses and, if so, what have been the main causes of such failures.

No.

(6) Whether any such factories are owned, controlled or managed by foreign capitalists.

The factory at Dhubri is controlled by the Swedish Match Company.

C. (1) What arrangements are in force for the sale of trees from Government forests to match factories?

The Company had a lease for a year, it is now working under ordinary permit.

(2) What is the royalty levied?

Under the lease 6 pies per cubic foot; under permit Rs. 2 per tree.

(3) Have any concessions for extracting timber for the manufacture of splints, veneers or packing cases been granted? If so, to whom?

Yes, under the lease above mentioned.

(4) Whether as a general question of policy any restrictions are imposed by the local Government on the grant of concessions to applicants of foreign nationality. If so, what is the nature of such restrictions?

No restrictions were imposed in the case of the company now working. Such restrictions are imposed in all mining concessions and it is open to

Government to impose such restrictions in the case of other enterprises. Such restrictions would take the form of requiring the company to be controlled by British subjects.

(5) Has the Forest Department undertaken or is it likely to undertake in the near future any operations for the establishment of plantations of trees suitable for the manufacture of matches?

No operations have been undertaken so far, nor are contemplated.

(6) Have any areas been planted with suitable trees by companies or firms undertaking the manufacture of matches?

No.

D. What are the conditions of transport—

(a) During the monsoon;

(b) During the dry season,

and what is the cost of freight by road, river, rail or sea, whichever method or methods would be necessary with reference to each site mentioned in reply to B. (1)?

Transport by river is the only method by which logs could be brought at an economic price to a factory; the cost of rafting to the existing factory at Dhubri (after formation of raft) is about Rs. 3 per ton or 50 cubic feet. In the other sites mentioned under B. (1) the cost would be about the same.

E. What is the extent of the local demand for matches? How far can the factories dispose of their outturn in the local market?

The demand is large; one or two more factories should easily be able to dispose of their outturn within the province.

F. What stage has the industry reached in your province? Altogether in its infancy.

Government of Bombay.

Letter, dated the 25th February 1927.

With reference to your letter No. 58, dated 7th January 1927, requesting to be furnished with information regarding the condition and prospects of the Match-making Industry in the Bombay Presidency, I am directed by the Government of Bombay (Transferred Departments) to state as follows in regard to the various points mentioned therein.

2. *Paragraph 2.*—The condition of the Match Industry in this Presidency is given in detail by the Director of Information in his note enclosed herewith. The Forest Department is now doing all in its power to help the exploitation of matchwoods. As regards the prospects of the industry as affected by the supply of matchwood from the Bombay forests, I am to observe that the kind of timber suitable for match manufacture is scattered throughout the Presidency, part of it locked up in inaccessible areas and part too far away from probable factory sites to admit of profitable exploitation, leaving a small balance which will not be sufficient to meet more than a fraction of the requirements of the various factories working in the Presidency; and unless the existing stock is supplemented by extensive plantations of suitable species at convenient centres, there is no prospect of the industry working independent of imported woods. The Forest Department is doing all that it possibly can with the present reduced establishment in the way of starting such plantations but the funds available do not admit of much being done and it will be worth while for the factories to undertake such plantations on their own account. The Forest Department will give every help and encouragement they can.

Paragraph 3A (1).—The following species have been extracted at one time or other for match manufacture from the forests:—

(1) *Ailanthus malabarica*.

(2) *Albizzia stipulata*.

- * (3) *Alstonia scholaris*.
- * (4) *Bombax malabaricum*.
- * (5) *Bombax insigne*.
- ** (6) *Boswellia serrata*.
- (7) *Cinnamomum* spp.
- (8) *Elaeocarpus* species.
- ** (9) *Garuga pinnata*.
- ** (10) *Holoptelea integrifolia*.
- (11) *Hymenodictyon Excelsum*.
- (12) *Kydia Calycina*.
- * (13) *Lophometalum wightianum*.
- * (14) *Machilus macrantha*.
- * (15) *Mangifera Indica*.
- (16) *Melia dubia*.
- (17) *Myristica* species.
- ** (18) *Odina Wodier*.
- ** (19) *Spondias mangifera*.
- * (20) *Spondias acuminata*.
- (21) *Symplocos Beddomel*.
- (22) *Trewia nudiflora*.
- (23) *Buchanania latifolia*.
- (24) *Dysoxylum binectariferum*.
- (25) *Holigarna arnottiana*.
- (26) *Diospyros paniculata*.
- (27) *Erythrina suberosa*.
- (28) *Erythrina indica*.
- (29) *Fig* spp.
- (30) *Sterculia foetida*.
- (31) *Tetrameles nudiflora*.
- (32) *Boswellia serrata*.
- (33) *Populus euphratica* (in Sind).

The manufacturers know best what species are suitable for splints, veneers and packing cases. The following information has been ascertained by the local officers from agents of factories or otherwise:—

Species Nos. (1) to (22) and (33) are reported to be suitable for splints.
Those marked with * are reported to yield superior splints.

Most of these species, i.e., Nos. (1) to (22), (33) and also (23) to (25) are reported as suitable for boxes.

Species Nos. (26) to (32) are reported to be suitable for the manufacture of packing cases.

It is impossible to give an accurate estimate of the total matchwood stand when a good deal of it is not available for economic exploitation for match manufacture, e.g., large quantities of *Boswellia serrata* (annual yield of about 2,000 tons) located in the Satpudas covering over 400 square miles of rugged country which cannot be exploited because its exploitation will be too expensive in view of the large average lead, rough country and absence of extraction roads. It is noteworthy that though the species is reported to be suitable for splints, no match manufacturing company has attempted its exploitation from the Satpudas. Experiments are at present in progress in North Khandesh to determine the suitability of this species for being tapped for its Oleo-gum-resins.

The appended statement shows the quantities of matchwoods in column 4 roughly estimated to be available in the forest areas shown in column 2 for match manufacture in factories at the places shown in column 5.

A. (2) Information on the point is furnished in column 7 of the statement.

A. (3) Information on the point is furnished in column 8 of the statement.

A. (4) Information on the point is furnished in column 9 of the statement.

B. (1) The sites considered suitable for the establishment of match factories have been indicated in the statement. The principal advantage of these sites is that they are fairly near the source of supply and that labour is available. Ahmedabad or the neighbourhood of Bombay has been included because there are well established factories there already.

B. (2) Full information is given in the statement enclosed herewith.

B. (3) The following quantities were removed by the various match manufacturing companies from Government forests. Separate figures for splints, veneers and boxes are not available:—

During 1925-26.

Name of match factory.	Quantity in tons of 50 cubic ft.	Source of supply.
Western India Match Co.	1,050	Kanara S. D. Kanara W. D. Kanara and East Thana. Panch Mahals.
	208	
	1	
	62	
Gujrat Islam Match Manufacturing Company	410	520
	110	
Santa Cruz Match Works, Bombay	200	Surat.
Karad Match Manufacturing Co.	490	Surat.
Belgaum Match Manufacturing Co.	14	Satara.
	2,545	Belgaum.

During the 5 years 1920-21 to 1924-25.

Division Circle.	No of tons of wood supplied.	Period.	Remarks.
1	2	3	4
Panch Mahals	864	During the last 5 years	...
Surat	40	Ditto	...
Kolaba	270	During the last 3 years	Not supplied before.
Satara	532	Ditto	Ditto.
Belgaum	28	During 1923-24 and 1924-25.	Ditto.
Sind	61	During the last 5 years	...

B. (4) No such factories have been erected on the sites selected by Mr. Troup.

B. (5) The Deccan Match Factory at Karad is reported to have been closed down this year on account of financial losses. The causes are not known. It is reported that the factory was conducted on very unbusinesslike and primitive lines and had not the remotest chance of ever succeeding.

The hand factory in Sind closed down at Rohri owing to a dispute and has not been seriously tested at Bubak.

B. (6) The Western India Match Company at Ambernath which is the biggest factory in the Bombay Presidency is a Swedish concern with an authorized capital of Rs. 75,00,000 and subscribed and paid up capital of Rs. 6,40,300 (up to 8th April 1925).

C. (1) The practice prevailing hitherto was that the match companies were allowed to remove specified match species at fixed royalty rates from specified areas for a fixed period—the arrangement being arrived at by private negotiations. In the case of the Kolaba and Thana forests where the supplies are far short of the requirements of the various match factories, in or near Bombay, looking to them for indigenous matchwood supplies, this system did not work to the satisfaction of the factories concerned. It was therefore decided to dispose of the right to extract matchwood species in them by tender or auction in open competition; and matchwood species in 7,288 acres in North Thana and 6,009 acres in West Thana have actually been so disposed of during the current year at Re. 1-1-0 and Re. 0-9-3 per cart load of material removed from main Felling Series and Pole Series in North Thana and Rs. 2-6-0 per cart load of material removed from West Thana.

A public sale is notified inviting tenders for the exploitation of matchwood species in Kolaba forests.

Some factories obtain a part of their supplies direct from coupe contractors and this system, which is the simplest of all, is reported to be spreading.

C. (2) Royalty varies according to accessibility or otherwise of the extraction area, quality of wood extracted and other circumstances. The rates at present are:—

Dangs	Re. 0-4-0 per cart load.
Panch Mahals	Re. 0-6-0 per cart load.
Kolaba	Re. 1-0-0 per cart load of matchwood species excepting mango.
Kolaba	Rs. 4-0-0 per cart load of mango.
Satara	Re. 0-8-0 per cart load.
Belgaum	Re. 0-8-0 per cart load.
S. D. Kanara	Rs. 6-0-0 per acre for removing matchwood species only.
S. D. Kanara	Re. 1-8-0 per ton of 50 cubic feet solid if trees are felled by selection.

C. (3) Except the right of removing matchwood on royalty from Government forests, no concession has been granted.

C. (4) All the match companies receive equal treatment in the matter of woods required by them irrespective of their nationalities.

C. (5) 50 acres were planted with *Bombax malabaricum* in Kalol Range of the Panch Mahals Division in the rains of 1924-25, and a further area was taken in hand in the rains of 1926-27. In addition to the plantations in the Panch Mahals 75 acres will be taken in hand annually in Thana. For Kolaba a scheme has been laid down to plant an area of 5,400 acres in 40 years. 205 acres will be taken in hand in the coming rains within a reasonable distance of the railway.

If the *Papulus suphratica* is found to be suitable for purposes of match manufacture, a regular yield of 1 to 2 thousand tons can be made available annually from Sind forests, working the forests under a separate working plan on a short rotation.

C. (6) About 1914 the Gujarat Islam Match Manufacturing Company started a plantation of *Bombax* and *Ailanthus* 123 acres in extent in the neighbourhood of Ahmedabad; the largest trees are now about 36 inches in girth.

D. *Tadri and Honavar*.—The material can be brought from the forest from within 5 miles by carts to the river whence it can be rafted down to the factory. The two places are connected with Bombay by water, being seaports situated at the mouths of rivers. Transport of the material to the factory will cost about 15 to 20 rupees per ton.

Khanapur.—The raw material can be carted to the rail from within 5 miles and thence railed to the factory. Transport will cost about Rs. 15 to 20 per ton.

Kolaba.—The material can be carted from within 20 miles to the nearest railway station or bunder whence it can be brought to the factory. Transport of the material to the station or bunder will cost on the average about Rs. 20 to 25 per ton.

Satara.—The material can be brought to the nearest railway station from the forest from within 20 miles, and thence railed to factory. Transport from the forest to the nearest railway station will cost about Rs. 20 to 25 per ton.

Thana.—The material can be brought by carts from the forest from within 10 miles to a railway station whence it can be railed to the factory. Transport of material to the rail will cost on the average about Rs. 20 to 25 per ton.

Dangs and Mandvi.—Material extracted from within 20 miles of rail can be brought to the railway station at Jharva in the case of the Dangs and to Madhi Railway Station in the case of Mandvi forest. Transport to the railway station will cost about Rs. 20 to 25 per ton.

Godhra.—Material from within 20 miles can be brought to the rail at a cost of Rs. 20 to 26 per ton.

During the monsoon the work of felling, carting and floating either completely stops or considerably slows down; and the factories will have to make arrangements to store sufficient quantities of matchwoods before the rains to tide them through the 4 or 5 months of the monsoon.

Sind.—During the flood season (June to September) no forest work can be carried out. Carts, camels and donkeys can be employed during the remainder of the year for transporting wood from the forests to the river bank. The cost of freight will be as under:—

	Rs.
By road heavy material by cart, say, 2 miles per 100 maunds	8
By road heavy material by cart, say, 1 mile per 100 maunds	6
By road billets by camels or donkeys, say, 2 miles per 100 maunds	6
By road billets by camels or donkeys, say, 1 mile per 100 maunds	4
By river 25 miles per 100 maunds	5
By river 50 miles per 100 maunds	7

E. No figures are available in this office.

F. The information regarding the stage reached by the Match industry is furnished in the note from the Director of Information referred to above.

Paragraph 4.—Regarding the inspection of match factories or sites by the members of the Tariff Board, a tour programme can be arranged by the Government of Bombay if information is given beforehand regarding the areas which the Board intend to inspect.

Summary of a Note prepared by the Director of Information, Bombay, on the Match Industry in the Bombay Presidency.

In 1916, the Indigenous Industries Committee investigated the Match Industry, and made certain suggestions and recommendations to Government pointing out that the chief problem to be solved, particularly in the Bombay Presidency, was the supply of wood suitable for the manufacture of matches that could hold its own for quality with the imported article, and until this problem was solved, no progress could be made in the development of the Industry. The Department of Industries was created in 1918. At that time, there were apparently only five Match Factories in this Presidency, of which two were in Ahmedabad, one in Kared, Satara District, one in Dharwar, and one in Belgaum. The Gujarat Islam Match Factory of Ahmedabad was the only one working regularly. It was started in 1897 and in 1918 was producing about 800 gross of Match Boxes per day. The other Factory at Ahmedabad was producing about 200 gross pyrotechnic matches. Both were working under difficulties, owing to their inability to obtain suitable wood and the difficulty of getting chemicals owing to the war.

The Import Duty on Matches which had hitherto been 5 per cent. *ad valorem*, was increased to 7½ per cent. in 1920-21 and from the 1st March 1921 to the 28th of February 1922 the *ad valorem* duty was replaced by a specific duty of 12 annas per gross boxes each containing not more than 75 matches. This was again increased to Re. 1-8-0 per gross boxes in March 1922, with a stipulation that each box must not contain more than 100 matches. This heavy import duty gave a definite impetus to the Industry, although only four Match Factories were working in the Presidency at that time. A match factory was started as Santa Cruz to import ready made splints and veneers for match boxes and chemicals. This factory started work in February 1923 by making matches by a hand process out of the imported materials. Three or four other Match Factories were established on similar lines, and, in the beginning of 1924, six Match Factories were working, using imported splints and veneers for boxes. These factories made large profits for the import duty of Re. 1-8-0 per gross gave a protection of more than 200 per cent. to this industry, for the cost did not amount to more than about 14 annas per gross, but the selling price was from Rs. 2 to Rs. 2-4-0 per gross. Imported Japanese matches were at the time sold in Bombay at a little less than Rs. 2 per gross, of which Re. 1-8-0 was the import duty. In 1921-22 the total import of matches from all foreign countries was valued at about 200 lakhs, of which Japan supplied matches worth Rs. 184 lakhs. More factories might perhaps have been started but for uncertainty as to the position regarding the protective duty which, it was feared, might at any time be revoked or reduced.

In November 1922 a Swedish Engineer arrived in Bombay from Stockholm, apparently to investigate the prospects of the Match industry in this country.

The manufacturers of matches who use indigenous wood were greatly concerned by the competition set up by the factories started in the suburbs of Bombay and manufacturing matches from imported splints and veneers. There was a considerable fall in the import of matches from 1921-22 to 1922-23, amounting to more than 16 lakhs gross, with a consequent drop in revenue of more than 24 lakhs in the form of import duty at Re. 1-8-0 per gross. It was found that the cost of 50 gross of imported splints and veneers was only Rs. 33 on which the import duty at the rate of 15 per cent. *ad valorem* amounted to about Rs. 5, which was equivalent to 1 anna 7 pies per gross. Imported splints are superior to the splints made from indigenous wood and the indigenous factories, therefore, found it impossible to meet the competition with matches made from imported splints, either in quality or in price.

In September 1923 a Joint Stock Company was registered in Bombay, under the name of Western India Match Company, Limited, with a capital of Rs. 1 lakh. The authorised capital of the Company has since been increased to Rs. 75 lakhs, with a paid up capital of Rs. 6,40,300. The Company was

started with the object of building match factories in Bombay, Calcutta, Madras and Karachi, the machinery and staff to be imported directly from Sweden. The Company acquired land in the Ambernath industrial area, and the factory was started at the end of September, 1924. They started by manufacturing matches from imported splints and veneers, applying the chemical tips in Bombay as other factories in Bombay were doing. The capacity of the factory is now 8,000 gross per day of 10 hours. The evasion of the import duty on matches by importing splints and veneers and manufacturing matches in this country having resulted in a great loss of revenue and having created an unhealthy competition with match factories using indigenous wood, the Government of India levied an import duty of 4 annas 6 pies per pound on splints and 6 annas per lb. on veneers on the 1st of March 1924. In May 1924, the Director of Industries visited the match factories in the suburbs of Bombay and found that almost all of them had ordered out match wood logs from Japan, Sweden, Russia, etc., together with suitable machinery and were busy converting their factories into power driven ones for manufacturing splints and veneers from imported logs. Some factories had very large stocks sufficient for a year or more, and owing to the fall in the Japanese Yen Exchange, it was found still profitable to import splints and veneers from Japan. The original idea of making matches by hand process out of imported splints and veneers was now abandoned, and elaborate and up-to-date machinery was imported for manufacturing matches from imported logs, on which the duty is only 15 per cent. *ad valorem*, or from indigenous wood available. Some factories used imported wood for making splints, as the splints made therefrom are white and strong, and indigenous wood is used for making boxes the colour of which does not matter much, as it is concealed by the covering label. The output of the 14 match factories in the Presidency in 1924-25 amounted to about 40 lacs gross per year.

A new cottage industry has sprung up in the suburbs of Bombay, in making empty match boxes from veneers supplied by the factories now established in Santa Cruz, Andheri, Kurla and Chatkopar, giving employment to several hundreds of people in their own homes. Ready made veneers, papers, labels, splints, etc., are supplied by the factories to the cottage workers who, with the help of their women and children, manufacture empty match boxes, for which they are paid at the rate of Re. 1 per 1,000 boxes. It is estimated that a man can prepare about 800 boxes per day.

Two of the factories in the suburbs of Bombay are entirely owned and managed by Japanese. A small match factory was established at Sukkur and subsequently removed to Bubak in November 1924. The factory is now worked by hand only and Bahan wood is now being tried.

The annual report of the Forest Administration for 1925 stated on the question of the organization for extracting match wood in forests that, of all the new concerns, only one, the Western India Match Manufacturing Company, succeeded in their experiments with such Indian soft woods as were available at hand, and were able to create an organization capable of extracting soft woods from the forests of Kolaba and East Thana in the neighbourhood of their factories. The present position of the industry is undergoing a very keen internal competition in price-cutting between the match factories. The present wholesale price of imported Swedish matches is from Rs. 2 to Rs. 2-4-0 per gross in Bombay, while the imports from Japan are negligible.

[illegible]

Imports of matchwood logs, splints and veneers for 1924-25.

		Value.
		Rs.
Logs of matchwood c. ft.	278,859	4,37,752
Undipped splints lbs.	276,997	69,898
Veneers for match boxes and empty boxes lbs.	1,655,924	5,69,588
TOTAL .		<u>10,77,238</u>



सत्यमेव जयते

Serial No.	Locality.	Species available.	Annual quantity available, in tons.	Site of factory	Remarks.	The proximity and accessibility of the source of supply of such materials, etc.	Kind and quantity of fuel available.	Available supply of labour for the factory and wages of such labour.
1	40,000 acres in water- course of Karamati River, 15 miles from Machini river.	Most of the species enumerated above and other soft woods not yet tried.	1600	Turti (North Kanara) Bombay Survey, Sheet No. 285. Sheet Hanswar (North Kanara) Bombay Survey, Sheet No. 289. Sheet 1 = a mile.	In 1925-26 206 tons were removed by the Western India Match Manufacturing Company from the factory at Ambarnash in Thana.	Accessible on either side of the rivers within a distance of 1-5 miles. The working expenses will be about Rs. 1000 per month of the rivers.	About 6,000 tons of wood fuel available annually at each place. The current price of wood fuel is about Rs. 1000 (100 c ft. stack measurement) on the river side depot.	Unskilled labour is available in limited quantities at these places at 8 annas to 12 annas per day. In the case of the factory at Hanswar and Ambarnash where wages are probably considerably higher.
2	20,000 acres in the waterbeds of river Shrawati and the tributaries and por- tals of the river.	Principal species: - Bombax malabaricum, Odium volter, Spondias manguifera, Trewia nudiflora, Buchanania latifolia, Principal species: Cordia alliodora, Cordia pinnata, Hologneton integrifolia, Magnifera indica, Odium volter, Mangifera indica, Bombax malabaricum, Cordia pinnata, Hymenodictyon exot- icum, Spondias manguifera, Trewia nudiflora, Odium volter.	800	Khanapur (Belgaum) a station on M. & S. N. Railway.	The woods from this area are utilized in the factory at Belgaum.	Easily accessible within 5 miles of the M. & S. N. Railway.	Best hardwood fuel available in quantities up to 15,000 tons per annum. Price per 100 c ft. stacked at Khanapur about Rs. 12.	Ditto.
3	From within 5 miles of M. & S. N. Railway in Belgaum Division.	Principal species: Spondias manguifera, Trewia nudiflora, Buchanania latifolia, Principal species: Cordia alliodora, Cordia pinnata, Hologneton integrifolia, Magnifera indica, Odium volter, Mangifera indica, Bombax malabaricum, Cordia pinnata, Hymenodictyon exot- icum, Spondias manguifera, Trewia nudiflora, Odium volter.	1000	Could be utilized in a factory near Bombay.	In 1925-26 1050 tons were removed by Western India Match Manufacturing Company from the factory at Ambarnash in Thana District.	The species occur all over the district. The exploration is being made by the Western India Match Manufacturing Company. All the forests are within 20 miles of exporting station or Bunder. Accessible within 20 miles from the nearest railway station.	Plenty of firewood available in Bombay and Ahmedabad.	Ditto.
4	Kolaba District forests.	Principal species: Spondias manguifera, Trewia nudiflora, Buchanania latifolia, Principal species: Cordia alliodora, Cordia pinnata, Hologneton integrifolia, Magnifera indica, Odium volter, Mangifera indica, Bombax malabaricum, Cordia pinnata, Hymenodictyon exot- icum, Spondias manguifera, Trewia nudiflora, Odium volter.	1500	Ditto	62 tons were removed from East Thana Division by Western India Match Manufacturing Company from the factory at Ambarnash.	Plenty of firewood available in Bombay and Ahmedabad.	Ditto.	Ditto.
5	Thana District forests.	Principal species: Spondias manguifera, Trewia nudiflora, Buchanania latifolia, Principal species: Cordia alliodora, Cordia pinnata, Hologneton integrifolia, Magnifera indica, Odium volter, Mangifera indica, Bombax malabaricum, Cordia pinnata, Hymenodictyon exot- icum, Spondias manguifera, Trewia nudiflora, Odium volter.	2000	Almehabad or near Bombay.	110 tons matchwood were removed by Western India Match Manufacturing Company from the factory at Ambarnash in Thana District. The distance of 211 miles by rail and an average lead of 10 miles by road from the source of supply. 300 tons were removed by Santa Cruz Match Manufacturing Company from the factory at Ambarnash in Thana District. The distance of 173 miles by rail with an average lead of 10 miles by road.	20 miles by cart track from the nearest railway station.	Plenty of fuel available in Bombay and Ahmedabad.	Ditto.
6	Parach Mahala	Ditto	800	Ditto	400 tons of matchwood were removed by Gupta Islam Match Manufacturing Company from the factory at Ambarnash in Thana District. The distance of 82 miles by rail and an average lead of 10 miles by road from the source of supply. The woods from this area were utilized in the factory at Khand which is now however closed. The hand factory was supplied with 41 tons at Rohiti and 20 tons at Bhatk.	Within 20 miles of railway station.	Ditto	Ditto.
7	Evergreen forests of Parach Range in Satara Division.	Elaeagnus, Ohloneum and Symplocos Belgaum.	50	Supplies to not just the establishment of factory.	The woods from this area were utilized in the factory at Khand which is now however closed. The hand factory was supplied with 41 tons at Rohiti and 20 tons at Bhatk.	Within 25 miles from the nearest railway station.	Ditto	Ditto.
8	6,000 acres Sakur, Shikarpur, Larva and Hyderabad Divi- sions in Sind.	Populus euphratica	2000	Supplies to not just the establishment of factory.	The woods from this area were utilized in the factory at Khand which is now however closed. The hand factory was supplied with 41 tons at Rohiti and 20 tons at Bhatk.	Within 25 miles from the nearest railway station.	Ditto	Ditto.

Large supplies of excellent timber available every- where at following rates:—	
Kind.	Average rate per 100 c.ft.
	At railway depot stacked.
Babul	Rs. 10
Kandi	8
Lye	64
	3

Large supplies of excellent wood fuel are available everywhere at following rates:—

Labour not plentiful. Wages are high from 12 annas to Re. 1 per diem.

Government of United Provinces.

Letter, dated the 26th February 1927.

I am directed to refer to your letter No. 58, dated January 8, 1927, asking for information on the match industry in this province.

2. Paragraph 3 of your letter. A number of species of wood have been tested and reported to be more or less suitable for the manufacture of splints and veneers but only a few of them are of any practical importance as the rest are either found in small quantities or in localities where their extraction would be difficult, and costly. The following species are worth mention:—

(1) *Bombax malabaricum* (*Semal*) is plentiful in Haldwani, the Terai and Bhabar Estates, North Kheri and Dehra Dun. An annual supply of about 200,000 cubic feet is available. The wood is good for boxes but soon becomes discoloured if kept in the log for any length of time, and splints break rather easily and glow.

(2) *Treulia nudiflora* (*Bhillaur*) exists in North Kheri, the Terai, and Bhabar Estates, Dehra Dun, South Kheri, Gonda and Bahraich. An annual supply of about 20,000 cubic feet is available. It is suitable both for splints and veneers.

(3) *Odina Wodier* (*Jhigna*) is common in miscellaneous forests and is fairly abundant in quantity. It is good for both splints and veneers.

(4) *Caruga pinnata* is common in all miscellaneous forests of the plains and about 20,000 cubic feet is available annually. It is fairly suitable for splints but not for boxes.

(5) *Heloptelea Integrifolia* (*Kanju*) is abundant in Haldwani division and very common in miscellaneous forests all along the tramline. About 20,000 cubic feet or more is available annually. The wood is suitable for inside boxes but rather brittle for outside ones.

(6) *Kydia Calycina* (*Pula*).—An annual supply of about 8,500 cubic feet is available and the wood is fair for splints and good for boxes.

(7) *Magnifera Indica* (*Am*).—The supply of this wood is abundant and it is fair for splints and good for boxes.

Wood for packing cases is available in sufficient quantity. The three varieties, viz., *Bombax Malabaricum*, *Heloptelea Integrifolia* and *Boswellia serrata* are very well suited for the purpose and should meet all demands for packing cases. The latter species is abundant in the Government Dudhi estates, Mirzapur.

3. The species mentioned in paragraph 2 above are found in mixed deciduous forests in localities where transport is easy. For an ordinary factory it is quite possible to obtain timbers suitable for splints, veneers and packing cases from the same locality. If the factory is a big one a comparatively large area will have to be tapped.

4. Cheap fuel is available in sufficient quantities. In fact the branch timbers and waste pieces left from the manufacture of matches might often give sufficient fuel. The cost of the former is from four annas to six annas per maund at site.

5. Unskilled labour is abundant and can be had at a rate of from two annas to seven annas per day.

6. 3 B. Bareilly is the best site for a match factory in the United Provinces, although small factories can be started in most large towns on the railway, which have a sufficient local demand for the finished article, provided satisfactory arrangements can be made for the supply of splints and veneers at reasonable rates. The manufacture of splints and veneers should be as near the forest as possible.

7. The following eight factories were established in these provinces:—

Name.	Location.	REMARKS.
1. North India Matches, Limited.	Bareilly . .	Established in 1910.
2. Lion Brand Match Factory .	Jwalapur near Hardwar.	Started two years ago and closed a year ago.
3. The Sitla Match Factory .	Benares . .	Established in 1922.
4. The Standard Match Factory	Nagina (Bijnor)	Established in 1923.
5. The Bhargava Dipshalaka Yantram.	Muttra . .	Started early in 1926 with hand and power machines on a small scale.
6 The Star Match Factory .	Lucknow . .	Started in 1923, closed in 1926.
7 Messrs. Baldeo Prasad & Co.	Mirzapur. .	Started in 1925.
8. The Bareilly Match Factory	Bareilly . .	Work was to start from February 15th, 1927. Up to date Roller's machinery worth two lakhs is installed. Production per day of ten hours is estimated at 1,500 gross boxes.

Nos. 1 and 2 are large factories; the rest are small.

8. Indigenous wood is utilized in factories Nos. 5 and 8 above for splints, veneers and packing cases.

9. Only the factory at Hardwar is on a site selected by Mr. Troup.

10. The North India Matches, Limited, closed down for reasons recorded in the enclosed note. The Nagina factory closed for want of expert advice and of suitable machinery. The Mirzapur factory did not work because of internal troubles of management and insufficiency of capital. The Jwalapur factory closed for the following reasons:—

The proprietor of the factory prepared splints and boxes from *Trewia nudiflora*. The matches were of a tolerably second class quality, but he made no arrangement for storing the timber, 60 per cent. of which became discoloured and generally unsuitable. The Divisional Forests Officer, Dehra Dun, was prepared to sell him trees but the financial position of the proprietor forced him to close his factory. The proprietor moreover was inexperienced in the use of chemicals.

11. The Bareilly Match Factory is reported to have a German expert as manager, though it is owned by an Indian. No factory is owned or controlled by foreign capitalists.

12. 3 C. No arrangements are in force at present for the sale of trees from Government forests to match factories.

13. As there is no contract no royalty can be quoted, but two annas per cubic feet in the round is probably the least which the Forest Department could charge.

14. A concession for extracting *Semal* timber for the manufacture of matches was granted in 1910 to Messrs. Gavin Jones and Son of Cawnpore who transferred their rights in 1911 to a Company called North India

Timber Limited. This Company subsequently became North India Matches, Limited under the control of Mr. C. T. Allen of Cawnpore.

15. The Question of granting concessions to applicants of foreign nationality has not been considered so far.

16. The Forest Department has undertaken no plantations having match timbers as their direct objective. The department is constantly experimenting with afforesting bare lands, and with replacing existing crops by artificial means. The object is to grow the most valuable species, such as sal, shisham, teak and sain, which can be grown easily and quickly. Semal and a few others which might serve as match timbers have been tried, but without much success so far.

17. No areas have been planted with suitable trees by companies or firms undertaking the manufacture of matches.

18. 3 D. Transport within the forest during the monsoon is impossible. During the dry season transport is by kutchra roads and cart tracks to railway stations. Transport in the chief Semal bearing areas is practicable as the ground is generally flat and not intersected by ravines. Bareilly, which is the best site for a match factory, is a railway centre and is not far from a forest area.

19. 3 E. The estimated consumption per day in the United Provinces is 6,000 gross boxes.

Local factories are so small that their whole outturn is sold locally. One selling agent has taken the sole agency of the production of the Bareilly Match Factory which is estimated at 1,500 gross boxes per day.

20. 3 F. The match industry in this province is still in an experimental stage. Neither the Bareilly Match Factory which is equipped with large up-to-date plant, nor the other factories which are working with small machines can yet be said to have established business on a firm footing. Government often receive applications for assistance, and inquiries for information on the possibilities of the industry; there are also other indications of a desire to start small factories, but the possibility of a power factory owned, controlled and financed by men of the province seems remote. Government have assisted the industry in the following ways:—

- (1) By supplying capital to small factories.
- (2) By giving expert advice on the suitability of woods for matches and of formula for the manufacture of match heads.
- (3) The supply of ready made splints and veneers to small manufacturers in the mufassil. A Government demonstration factory for this purpose is being started at the Wood Working Institute, Bareilly.
- (4) A concession for extracting timber.

21. If the Tariff Board wish to tour in this province, they would do well to visit Bareilly which is equipped with foreign (German) machines capable of producing 1,500 gross boxes per day of ten hours. They might also visit the Dip Shalaka Yantram at Muttra which furnishes an example of the match industry run on a small basis.

NOTE SUBMITTED BY NORTH INDIAN MATCHES LIMITED, BAREILLY.

The Match Industry in the United Provinces.

In recounting the history of this industry and its initiation in the United Provinces, it would seem desirable and only fair to those who may be attracted by the idea of commencing this or other new industries, that the vicissitudes that may impede promoters should be recorded.

Early in 1910 Messrs. Gavin Jones and Son of Cawnpore were given, as a concession, a guarantee from the United Provinces Government that if

they would start a Match and Packing-case Factory they should be allowed to extract from the Terai and Bhabar Estate Forest not less than one lakh cubic feet of Semul timber annually; such timber to be marked by the Forest Department within a distance not greater than eight miles in a direct line from any station on the Rohilkund and Kumaon Railway such trees to be not less than eight feet in girth: at a rate of one anna per cubic foot in the forest, a rebate of half-anna per cubic foot to be made in due course should the Company fail to show a return of 10 per cent. profit per annum.

No progress was made however until a year later when Messrs. Gavin Jones and Son transferred their rights, in exchange for cash and shares in a prospective Match and Packing-case Company: this Company North India Timber, Limited, was formed and registered in 1911, and although the capital of the Company only required to be 3½ lakhs paid up, there was perhaps a natural difference shown by those who were asked to assist in raising even this small amount; match machinery was obtained from Germany and a complete box-making plant with an up-to-date power installation from England. Bareilly has proved itself to be a most suitable centre for this industry, and an excellent site was hit upon outside the city.

Meanwhile the authorities responsible for the Terai and Bhabar Forest were impressing upon this Company that the concession was dated back to more than a year ago, and that unless activity was immediately displayed in the felling and carting of timber the concession would have to be withdrawn. Actually the promoters had lost no time in obtaining the necessary plant from England and the Continent, and in setting up factories, godowns and offices; they had indeed made much progress with the above, that at this stage they could not risk the cancellation of the concession and they thereupon proceeded to fell and cart timber although their factory was actually not then in working order. The task of extracting huge logs over the notorious Terai and Bhabar country intersected as it is by streams which flood with the least rain in the hills, was one of exceeding difficulty; contractors could not be induced to undertake the felling and carting at anything like a reasonable rate, and it was therefore necessary for the Company to employ a European in supervision, and purchase its own buffaloes and carts. Heavy expenditure inevitably followed, added to which the Company had to reckon the loss involved through their being compelled, in order to save their concession, to cut timber before they were ready for it. Semul in itself is probably one of the most unsatisfactory timbers extant; a tree of eight feet in girth almost always has huge buttresses about 5' from the ground, and a large rotten core: "straight" timber is rather the exception than the rule; it is soft without grain and full of moisture, which evaporate very quickly indeed: the result being that logs when felled, dry up rapidly at each end, and as the log dries, so it turns to powder. It is said that logs may be preserved for some time by being immersed under water; but factories not so fortunate as to be situated on the banks of a river, cannot well afford enormous tanks to hold thousands of cubic feet of timber. One, therefore, of the problems which has faced and still faces the Bareilly factory, is that of obtaining fresh timber supplies in the four months when entry to the Terai forests is not only forbidden but impossible: otherwise storage tanks must be built and heavy expenditure incurred. The quality of Semul timber is such, that in order to satisfy the requirements of the expert match-maker, each and every log, however fresh, has to be boiled before being put on to the Peeling machines. Then again every log before going to the boiling vats must be trimmed of all dry portions and irregularities inclusive of the bark, which in Semul trees, is very thick: the loss in wood on this count is very heavy indeed, generally running to 30 per cent. in average supplies of timber.

To those who have not had the opportunity of studying the conversion of logs into matches and match boxes, it is difficult to convey how perfect the "temper" of the peeled wood must be, in order to obtain boxes which will bend readily to shape, or splints which will not prove either too soft

or too brittle. For this reason too the United Provinces Forest Department have been asked to supply logs for splints from Chakrata. Having arrived at this point, however, in the process of manufacture, the rest is comparatively easy, provided the trained labour is quick and skilful, machines are kept regulated to a nicety, and chemical mixtures are most carefully and constantly controlled.

In pre-war times the Continental market underquoted England, America or Japan, for almost every requirement in chemicals, paper labels, etc. With the cutting off of these supplies, fresh difficulties arose, extra prices had to be paid, and the regularity of shipments was completely disorganised. For a few weeks supplies of matches to India ran small, prices rose by some 40 per cent.: but the Japanese Match Industry promptly availed itself of the opportunity given to flood India with the cheapest possible quality of match, sold at a price which could not have been quoted but for the assistance rendered by the Japanese Government. Authoritative enquiry is now proceeding in regard to how far this subsidizing is extended by the Japanese Government; but there is no doubt that in shipping freights particularly, very special inducements are given. Japanese matches are still to be had in enormous quantities at annas 7 and annas 8 per gross boxes c.i.f. Calcutta, and it does not seem as if manufacturers of matches in India, near Indian ports, would have much chance of surviving, until the Government of India decide to protect them against this unfair competition.

The manufacturer in these Provinces is assisted to some extent by long leads over rail from ports: but here again the up-country manufacturer does not receive the same rates as the importer can obtain on his consignments sent up-country.

At the end of 1923, the Bareilly Match Factory, after a three years struggle was in the following position:—

	Rs.
Total outlay	3,48,091
Profit	Nil.
Losses	39,277

It was at this stage that the Company's Match Expert admitted, that with a single plant turning out at most 700 gross boxes per day, even with the establishment and all other fixed charges of the very lowest, an adequate profit could hardly be hoped for. Likewise the Directors found that no profit was to be made in the manufacture of Semul wood packing cases in competition with the bazaar, who were able to meet the bulk of North Indian's demand by a supply of English imported "piece-goods" cases. Thus, when a Burma Company, also having a single output plant, offered to amalgamate with the Bareilly Company, on certain conditions, the offer was accepted.

The position of the Company at this time, August 1924, was as follows:—

	Rs.
Total outlay	3,63,076
Profit	Nil.
Losses	68,199

The Burma Company's conditions included the complete removal of the Sawmill and Box-making plant, which had proved itself unprofitable; the writing off of all losses up-to-date (August 1914): a drastic writing down of values, and full depreciation on all machinery and buildings: a matter of Rs. 2,13,600 to be written off.

The promoter of the industry, Mr. C. T. Allen, took it on himself to relieve the Company of the above Rs. 2,13,600 against which there ranked the following assets which he agreed to take over as a set off:—

	Rs.
Sawmill machinery (estimated to realize) . . .	6,000
Refund due by Government (claimed 14th September 1914; still due in part 9th October 1915) . .	14,020
Book debts	5,770
TOTAL	25,790
Leaving a deficiency of	1,87,810

In the new Company now registered as North India Matches, Limited, the shareholders are to receive the equivalent of their holdings in the old Company; Mr. C. T. Allen receiving, in addition to his holding of Ordinary Shares, a nominal holding of 11,250 Deferred Re. 1 shares, which will only benefit after the Ordinary Shares have received a dividend of 6 per cent.; the Burma Company also receive a small number (3,750) Deferred Shares for Goodwill.

As to the future, the United Provinces Government have admitted that the terms of the Timber Concession were unworkable, and they have therefore agreed to revise these. On these new terms depend the future of the industry in so far as these Provinces are concerned. The following is a summary of the terms under which certain other match manufacturing Companies in the east have obtained timber supplies:

Ahmedabad Match Factory.—This Company was granted a concession by the Bombay Presidency for 15 years for the following timber:

Semul (*Bombax Malabaricum*), **Boswellia Serrata**, **Alianthus Excelsa**. The price paid under the concession was two annas per carload of 50 maunds, which works out at 40 to 45 cubic feet for a royalty of two annas, or considerably more than 20 cubic feet for one anna. The above concession expired in 1912, and the Lieutenant-Governor, during a public reference to interested bodies, made the following statement in regard to the Match Industry of that district:—

“As regards the supply of wood, the position is happily simpler, and the powers of the Government of Bombay are adequate. I understand that the present concession expires on the 15th June next. If extension is applied for, rest assured that it will be gladly given.”

Rangoon Match Factory.—The royalty paid to the Government in this case amounts to 50 cubic feet for one rupee, or four pies per cubic foot, for Semul wood.

Belgaum Match Factory.—The following is a significant clause from the prospectus of this Company:

“1. Government have graciously granted free of royalty all the wood required for the factory.”

Travancore Match Factory—which was inaugurated in April 1914.

The industry at this place has received the following assistance from its Government.

1. A large area of eight acres has been granted free for the purpose of establishing the match factory.
2. All wood which is required for building purposes, Factory, Godowns, Manager's quarters, coolie lines, etc., is supplied free of cost; this includes valuable hard woods.
3. The Government undertakes to deliver for the first three years wood for match manufacture at the rate of 3½ anna per cubic

foot, *free at factory site*; for the subsequent 17 years there is a guarantee that the wood shall not cost more than 4½ annas per cubic foot.

The Bareilly Factory, with its four years bitter experience behind it, is now in a position to detail with the utmost confidence, the only conditions, terms, establishment charges, working charges, etc., etc., with which the match-making industry in this province can successfully carry on. Every phase of the business has been tested, most careful records made, and data are now to hand which enable them to say with certainty whether conditions are such that they can continue with the ultimate hope of success, or whether it is advisable to close down in order to avoid throwing more good money after bad.

The industry, as is generally known, is exceedingly finely cut, and since everything turns on the question of the quality and price of the timber, it lies entirely with the Government of these provinces to say whether the industry shall be adequately assisted, or allowed to die, never to start again. It is for the Government of these Provinces to decide whether they will or will not forego a small and fluctuating profit from the sale of their semul and spruce timber and by doing so determinate or encourage this industry; for it is quite certain that failure will prevent any one else again venturing any decision they may now come to regarding the rates they may charge and terms they may offer, should not be influenced by war time demands from contractors for packing case wood: demands that will cease as soon as trade in piece-goods revives. In course of time too, before serious harm is done the Government of India may be induced to protect this country from the unfair Japanese competition that is now swamping it.

In concluding this note a statement showing in some detail costing of matches and the selling price that can be realized, will probably be found useful.

Cost of matches per gross, calculated upon a double outturn of 1,400 gross daily for 25 days=35,000 gross monthly.

	Rs.	A.	P.
Chemicals	0	2	6·73
Paper	0	0	10
Labels	0	0	7
Wood	0	2	0·87
Packing cases	0	1	3
Power	0	0	9
Wages	0	0	9·90
Salaries	0	0	7·60
Depreciation, Interest and General expenses	0	1	0
TOTAL COST PER GROSS	0	10	6·10

The present wholesale selling price is Re. 0-11-10 per gross nett: a higher rate could be obtained for splints made from spruce wood.

Forest Department, Burma.

A.—WRITTEN.

- (1) *Un-official note, dated the 28th February 1927, from the Chief Conservator of Forests, Burma, to the Secretary, Tariff Board.*

As requested I send a copy of the statistics of matchwood species in Insein Forest Division. These statistics are based on the result of actual countings.

At our informal interview the other day I was asked to state which species of those enumerated on pages 64 and 65 of Mr. Troup's Memoir on the match industry were proved suitable for the purpose. I do not know to what extent all have been tested for the purpose, but I understand that the following are definitely considered suitable:—

3. *Anthocephalus Cadamba* (Mau).
4. *Bombax insigne* (Didu).
5. *Bombax malabaricum* (Letpan).
25. *Spondias magnifera* (Gwe).
- Sterculia campanulata* (Sawbya).

The following have not been tested definitely:—

7. *Duabanga Sonneratioides* (Myaukngo).
14. *Gmelina arborea* (Yemane).

Matchwood statistics for Insein Division.

Accompanying statement gives the full details of estimate of stock of timbers suitable for matchwoods in areas in which enumerations were carried out in 1925-26.

The exploitable girth has been fixed at 5' 0" at felling height which for purposes of estimating the yield has been taken at 18" diameter at breast height. It is estimated that the average outturn per tree 5' 0" and over at felling height is 1 ton. Working on these figures the tonnage per acre is as follows:—

Mahuya Reserve, whole species enumerated as matchwoods:

Sawbya Sterculia campanulata.

Gwe Spondias mangifera.

Mau { *Anthocephalus Cadamba.*
 Barcocephalus cordatus.

Didu Bombax insigne.

Letpan Bombax malabaricum.

Total area 47,776 acres.

Total stock 18" and over—14,848 trees, each equal to 1 ton.

Tonnage per acre—0.31 ton.

Paunglin.—29 compartments out of a total of 100 but containing the most accessible forest.

Same species as in Mahuya.

Total area enumerated about 19,400 acres.

Total stock—7,731 trees, each equal to 1 ton, 18" and over.

Tonnage per acre—0.4 ton.

Western Plains.—The H. Hlaing Yoma Plains, S. Hlaing Yoma Plains, Magayi and Thabyu reserves. Same species as for Mahuya reserve, but including *thitpok* (*Tetrameles nudiflora*) which is probably unsuitable.

Total area—45,432 acres.

Total stock 18" and over—11,186 trees, each equal to 1 ton.

Tonnage per acre—0.25 ton.

MATCHWOODS IN INSEIN DIVISION.

BASED ON ENUMERATIONS MADE IN 1926.

Estimated number of matchwood trees of 8-inch diameter and over.

	Species.	DIAMETER CLASSES.						Total.	Remarks.
		8-12 inches.	12-16 inches.	16-20 inches.*	20-24 inches.	24-28 inches.	28-32 inches.	32 inches and over.	
Mahuya Reserve (whole area).	Sawhya . .	17,990	15,333	8,006	2,977	361	163	50	45,500
	Gwe . .	8,305	7,312	3,402	835	269	99	69	20,351
	Maat . .	853	933	969	812	539	306	408	4,820
	Didu . .	1,213	848	541	263	224	114	206	3,409
	Letpan . .	42	21	7	12	6	10	4	102
		28,403	24,467	12,925	4,959	1,999	692	787	74,182

* The minimum girth prescribed in the Dawood lease (5' at point of felling=4'-6" at breast height) is considered to fall about the middle of this diameter class.

	Species.	DIAMETER CLASSES.							Total.	Remarks.
		8-12 inches.	12-16 inches.	16-20 inches.	20-24 inches.	24-28 inches.	28-32 inches.	32 inches and over.		
Paunglin Reserve 29 compartments only out of a total for the whole reserve of 100 compartments averaging 1 square mile in area.	Sawbys .	2,074	3,134	2,560	1,017	302	75	39	9,201	
	Gwe .	2,474	2,594	1,915	835	331	67	93	8,309	
	Man .	288	332	329	438	235	137	179	1,938	
	Didu .	1,139	763	674	446	228	181	419	3,850	
	Letpan .	0	3	5	0	5	3	11	27	
		5,975	6,826	5,483	2,786	1,101	463	741	23,325	
The whole of the Western Plains series except the Hmuwbi Reserve.	Sawbys .	1,564	1,835	864	492	214	48	73	5,090	
	Didu .	10,366	5,935	2,220	866	347	140	175	20,049	
	Gwe .	38,181	23,572	7,981	2,319	484	246	250	73,033	
	Man .	...	...	...	...	...	...	...	...
	Letpan .	...	...	...	...	...	...	...	...
	Thitpok .	...	...	...	...	...	...	...	...
		50,111	31,342	11,065	3,677	1,045	434	498	98,172	

(2) *Letter dated the 21st March 1927, from the Chief Conservator of Forests, Burma, to the Secretary, Tariff Board.*

As requested, I have the honour to attach a financial forecast of planting for purposes of supplying wood to the match industry. I may add that as stated in the preamble this forecast is based on no data as no data on the subject are available and in the absence of data, it can have little value. I, however, believe that it is on the safe side.

Financial forecast of planting for purposes of supplying wood to the match industry.

We have no actual experiments on which to frame estimates of the finance of planting matchwoods and I have already stated in my report that to enable a safe estimate to be framed experiments up to 15 years would be necessary. In the absence of data based on actual experiments, any estimates put forward are pure guess work. It is on this acceptance that I put forward the notes below.

Land for plantations.—There are two alternatives:—

- (1) to plant up suitable areas in reserved forests;
- (2) to reserve or acquire land outside reserved forests for the purpose of forming plantations.

Under the first alternative the areas planted would not be continuous; but would consist of scattered patches throughout forest that was not suitable for purposes of planting. Apart from the difficulty in finding suitable areas sufficiently concentrated to allow of economical planting, the matter of planting for the supply of matchwoods will have to be considered with reference to other interests such as the requirements of the rural population which in the future will have to be met largely from artificially created crops as also from the financial standpoint as it is probable that it will pay better to plant timber producing species. It must be remembered that the areas in our reserved forests that are suitable for planting and at the same time accessible to economical extraction are very limited.

The second alternative may prove expensive and difficult as all accessible areas suitable for planting are more or less already occupied. Acquisition costs would therefore be heavy and unless the areas were reserved the finance of the plantations would be further hampered by land revenue assessment. Owing to accessibility the cost of protection would be heavy and the area would have to be completely fenced against cattle.

Letpan (*Bombax malabaricum*) however springs up naturally on newly formed sandbanks which have been raised above the ordinary flood level and should Government decide to have the possibilities of reserving land for the purpose of planting matchwoods investigated, a careful examination of the river in land should be undertaken. There is undoubtedly much land that grows *letpan* naturally, notably along the Irrawaddy and its large tributaries above Mandalay. The matter should however be undertaken cautiously. The first point is to assure ourselves as to the extent to which planting or regeneration of such land is an economic proposition. Our experience so far has shown that there is great danger of the young plants being washed out by floods and apart from this there is a general tendency to instability in the case of riverain land. Reservation should only be undertaken when the question of economic planting has been decided.

Cost of formation.—The cost of formation would depend on whether communities practising shifting cultivation were available to undertake the work. Should these be available, the cost of formation should not exceed Rs. 30 per acre and in some cases it may be as low as Rs. 20 per acre. Should communities practising *taungya* cultivation not be available for the work, the cost would be considerably enhanced and may amount to anything up to Rs. 120 per acre.

Cost of tending.—The cost of tending will depend entirely on the cost of protection against man and cattle, as apart from this there should be little or no expenditure outside the cost of formation. What little there is should be offset by the intermediate yields of thinnings and in the case of *Bombax*, the sale of cotton. Assuming that one man on Rs. 30 per mensem can patrol 320 acres, the cost of protection would work out at Rs. 1.1 per acre per annum, say Rs. 2 to include the cost of supervision.

Yield per acre.—We have no data as to what this will be. On a short rotation of 15 to 30 years I should not risk putting it higher than 25 to 30 tons to the acre though there is reason to assume that with a 30-year rotation, the yield will approximate to 60 tons to the acre.

Financial forecast.—Assuming that there will be no charge for taxation, I append a financial forecast on the lines of that on page 34 of Mr. Troup's Memoir. On this forecast it should be possible eventually to supply standing timber at a royalty rate of Rs. 10 per ton round of 50 c.ft. which should allow of delivery at the mill at a cost not exceeding Rs. 35 per ton, the extraction being undertaken by private agency.

(Sd.) H. W. A. WATSON,

*Chief Conservator of Forests,
Burma.*

The 21st March 1927.



Financial forecast excluding any question of taxation on the land.

Cost of formation and early tending to end of first 5 years.	Capitalised cost of protection and supervision at Rs. 2 per acre per annum at 4 per cent. compound interest.	TOTAL COST OF FORMATION CAPITALISED.				COST AT MATURITY RECKONING AT 4% COMPOUND INTEREST.				BASIC COST OF PRODUCING UTILIZABLE STANDING TIMBER PER TON OF 50 C. FT. ROUND (RS. AND DECIMALS OF A RUPEE).			
		15 years rotation.	20 years rotation.	25 years rotation.	30 years rotation.	15 years rotation.	20 years rotation.	25 years rotation.	30 years rotation.	15 years rotation 25 tons per acre.	20 years rotation 30 tons per acre.	25 years rotation 35 tons per acre.	30 years rotation 40 tons per acre.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.				
Rs.													
10	30 years rotation Rs. 34.58.	32.24	37.18	41.24	44.58	58	81.4	119.94	144.43	2.32	2.71	3.43	3.61
20		42.24	47.18	51.24	54.58	76	103.3	146.60	176.86	3.04	3.44	4.19	4.42
30		52.24	57.18	61.24	64.58	94	125.2	178.26	209.29	3.96	4.17	4.95	5.23
40		62.24	67.18	71.24	74.58	112	147.1	189.92	241.72	4.48	4.90	5.43	6.04
50	25 years rotation Rs. 31.24.	72.24	77.18	81.24	84.58	130	169.0	216.58	274.15	5.20	5.35	6.17	6.85
60		82.24	87.18	91.24	94.58	148	190.9	243.24	306.58	5.92	6.36	6.95	7.66
70	20 years rotation Rs. 27.10.	92.24	97.18	101.24	104.58	166	212.8	269.90	339.00	6.64	7.09	7.71	8.48
80		102.24	107.18	111.24	114.58	184	234.7	296.56	371.43	7.36	7.82	8.47	9.28
90	15 years rotation Rs. 23.24.	112.24	117.18	121.24	124.58	202	256.6	323.23	403.86	8.03	8.55	9.23	10.10
100		122.24	127.18	131.24	134.58	220	278.5	349.88	436.29	8.80	9.28	10.00	10.90
110		132.24	137.18	141.24	144.58	238	300.4	376.54	468.72	9.52	10.01	10.76	11.72
120		142.24	147.18	151.24	154.58	256	322.3	403.20	501.15	10.24	10.74	11.52	12.53

(3) Letter dated 24th March 1927, from the Conservator of Forests, Hlaing Circle, Burma, to the Secretary, Tariff Board.

I have the honour to forward herewith four copies of a note on match woods. I have telegraphed for the figures required in paragraph 6.

Match woods.

General.—Match woods are forest weeds. Their advantages are that they grow very fast and can be floated but much of the forest from which they are exploited is also accessible to extraction by land, and the more valuable hardwoods are more numerous and more valuable. By a lucky accident we now receive Rs. 12½ for match woods from the Paunglin-Mahuya block in Insein, but a recent tender sale of a more accessible block only realized Rs. 6 and that seems to be the true value.

2. *Pyinkado* (*Xylia dolabriformis*) alone is more numerous than all match woods put together (about 37,500 accessible trees to 31,000 of match woods, all over 20 inches diameter in the Paunglin-Mahuya block) and a normal royalty for it is Rs. 15 as against Rs. 6. Many other species are worth more than match woods and teak very much more. It is therefore most improbable that operations to improve the growing stock will favour match woods to any appreciable extent. Extraction from mixed forests must therefore be considered temporary and is unlikely to be very satisfactory.

3. Among match woods, the species likely to be considered obligatory are :—

- Letpan (*Bombax malabaricum*).
- Didu (*Bombax insigne*).
- Sawhya (*Sterculia paniculata*).
- Odein (*Bhretia laevis*).
- Maulettanshe (*Sarcocephalus cordatus*).
- Serkadon (*Treulia nudiflora*).

Optional species are :—

- Thitpok (*Tetrameles nudiflora*).
- Thabutgyi (*Milusa velutina*).
- Gwe (*Spondias mangifera*).
- Nabe (*Odina Wodier*).
- Thitpyauk (*Supium insigne*).
- Letkok (*Sterculia sp.*).
- Bonneza (*Albizia stipulata*).
- Myaukngo (*Duabanga sonneratiodes*).
- Thakutpo (*Stereospermum sp.*).
- Panga (*Terminalia Chebula*).

4. Of these Sawhya, gwe, mau, didu and letpan were enumerated by Mr. Scott in part of Insein division and his estimated annual outturn for all match woods for the whole division is 7,000 trees of 4½ ft. breast girth and upwards (probably averaging a ton each) from 237,251 acres. This amounts to an outturn of a ton a year for every 41 acres. This estimate is based on the 15 years felling cycle and though the number of trees may remain constant, the tonnage is likely to decline.

5. The distribution is so scanty and probabilities of increasing the stock so remote that continued working in mixed forests seems unlikely. Insein is likely to contain considerably above the average volume of match woods and there is no reason to expect anything better near any of the larger towns; in fact it is questionable whether there is anything better in the whole of Burma. The future of the match trade is therefore likely to depend on planting.

6. In 1925 I inspected the letpan plantations in Helzada. They were formed under very favourable conditions, sandy alluvium on the banks of a Yoma stream. In the 1919 plantation, then 6 years old, the average on lower ground was 43 feet high and 29 inches in girth and on a higher shelf 54 feet high and 40 inches in girth. The average for the whole plantation now (1927) is said to be feet high and inches in girth. A first class teak plantation on more fertile soil runs to about 45 feet high in 6 and 52 feet in 8 years and probably produces about 50 tons to the acre on a 80 year rotation. It may not be too optimistic to expect 25 tons to the acre on a 30 year rotation for match woods provided that fertile sandy alluvium is chosen for plantations.

7. The difficulty as regards planting will be to find a large area of suitable soil over which there are not too exacting claims. Reservation over 12,000 acres of soil of this kind for grazing (Pyinmana division) cost Rs. 1,20,239. It is possible that a firm or an individual might acquire land in cheaper rate. There are considerable stretches round Moulmein, especially up the Salween, but we can hardly recommend planting on a large scale by firms or private individuals until we know more about the rate of growth and probable cost. Given a suitable form of cultivation the direct cost should not exceed Rs. 50 per acre but to this must be added the value of the land if bought for the purpose and the cost of protection and supervision. Firms and individuals should be able to cut the latter considerably below Government expenditure but it is not safe to put it much less than Rs. 2 per acre per annum and it is quite likely that fencing will be also necessary. The Chief Conservator has sent in tables of cost and I agree with him that we must work for a minimum charge of Rs. 10 a ton.

8. I estimate the cost of formation with a suitable form of cultivation as follows:—

Rs. 16, Rs. 6, Rs. 4, Rs. 2, Re. 1.—Re. 1 from year to year or about Rs. 30 per acre at ten years, but to cover failures it is better to put the cost at Rs. 50 an acre. This may be reduced by sale of thinnings between ten years of age and maturity. At four per cent. this expenditure will amount to about Rs. 147 and a cost of Rs. 2 per acre for supervision and protection to a further Rs. 110 or a total of Rs. 257. This shows a small deficit between a probable selling value of Rs. 10 a ton for 25 tons and the cost at compound interest, but the expenditure should be slightly reduced by the net sale value of stems removed in thinnings at 15, 20 and 25 years. The value of the land is taken as nil.

FOREST DEPARTMENT, BURMA.

B.—ORAL.

Evidence of Messrs. H. W. A. WATSON, Chief Conservator of Forests and W. A. ROBERTSON, Conservator, Utilisation Circle recorded at Rangoon on Saturday, the 26th March, 1927.

Introductory.

President.—Mr. Watson, you are the Chief Conservator of Forests.

Mr. Watson.—Yes.

President.—Mr. Robertson, you are the Conservator of Forests, Utilisation Circle.

Mr. Robertson.—Yes.

President.—What does 'Utilisation Circle' mean?

Mr. Watson.—It deals with departmental extraction and timber research.

Mr. Mathias.—Is the Conservator doing the same work in other Provinces?

Mr. Robertson.—Yes.

Dr. Matthai.—Are the sales organised by you?

Mr. Robertson.—Yes, those held in Rangoon, but the upcountry sales are dealt with by the people on the spot.

President.—The forests in Burma are a transferred subject.

Mr. Watson.—Yes.

President.—I wish to know the relation between the Commercial department of the Government or the Industrial department of the Government and the forests. Are they under the same Ministry?

Mr. Watson.—Yes.

President.—I suppose you have not got a Director of Industries, but you have got a Development Commissioner.

Mr. Watson.—Yes.

President.—If it is a question of establishing an industry—take the match industry for instance—there are two aspects to that question, one is purely the forest aspect and the other is the industrial or the commercial aspect.

Mr. Watson.—Both come under the same Minister.

President.—That is what I wish to know. It is rather fortunate that there is no overlapping.

Mr. Watson.—No.

President.—At present we have not found it necessary to examine the Development Commissioner, but at a later stage when we formulate some sort of idea as to how the enquiry is going on, it may be necessary to examine the Development Commissioner.

Mr. Mathias.—Has the Forest Department any relation with the Development Commissioner?

Mr. Watson.—The Development Commissioner deals with Excise, Mines and I think Industries, but I am not absolutely certain.

Mr. Robertson.—He deals with Factories, Co-operative Societies, etc.

Mr. Mathias.—In some respects the Development Commissioner corresponds to the Director of Industries in other provinces.

Mr. Watson.—Yes.

Forest Research.

President.—Now as regards research, what arrangements have you here in this department?

Mr. Watson.—Research in Sylviculture, Botany, Zoology—so far as concerns the growth of trees under the Conservator of Forests, Working plans who is stationed at Maymyo, and the research concerned with the economic products is under the control of the Utilisation Circle.

President.—There is a branch which deals with the economic aspects of forestry.

Mr. Watson.—Yes.

President.—Do you experiment with wood for industrial purposes?

Mr. Watson.—Yes, we have got experimental workshops for that.

President.—For instance would it be part of your work to examine the different kinds of wood for the manufacture of matches?

Mr. Robertson.—Yes, but that happens to be a particularly specialised investigation. In our experimental workshops we only carry out the work that is really of immediate local interest, that is the applied research work. The scientific research part is done in Dehra Dun. These are two aspects of the work. The scientific research which is of general interest to the whole empire is done at Dehra Dun, but there are certain branches which are not economical to carry out there and which we do here.

President.—If a man was in search of a particular wood for a particular industry and he wanted to be satisfied whether that was suitable for that purpose, he would have to go to Dehra Dun.

Mr. Robertson.—He would probably come to me first and ask me if I had any information on the subject. If I had enough for his purpose he would stop there, but probably I should not have enough. In that case I should send the problem on to Dehra Dun.

President.—They would then experiment with the wood there.

Mr. Robertson.—They do timber testing which requires a large technical staff. It is therefore much cheaper to concentrate it there, but certain branches like the seasoning of timber the actual making up of a timber to make it suitable for particular purpose are much more economically done here. So we have divided the work in that way.

Mr. Mathias.—In the case of matches, would not that be a matter which would be investigated locally, in regard to a number of points such as whether wood is absorbent of wax, whether it would break, etc.?

Mr. Robertson.—That is much more in the timber testing line. The testing of absorbency is much more of a laboratory job than a workshop job. If they reported well on the wood, then we would try it actually on the spot. Very often we tackle a problem that way.

Dr. Matthai.—Are you speaking of Dehra Dun?

Mr. Robertson.—Yes. I send the timber over there. They do purely the laboratory test at Dehra Dun and then I carry out the actual applied tests here.

President.—They carry out one or two applied tests also. For instance in the case of bamboo they have a pulp making plant.

Mr. Robertson.—It is an expensive plant for the quantities used. It is more economical to send the raw material over there than to have a plant here, because in the latter case it would be working only quarter time.

Mr. Mathias.—The scientific test does not imply that that particular wood would be a commercial success.

Mr. Robertson.—By no means but it gives a very good indication. If Dehra Dun say that *prima facie* a timber is suitable, we work it out here on the spot in conjunction with the match factory owners or anybody else who wants it. For instance, people have applied to me for timber for sucker rods. We had strength tests made at Dehra Dun, and on their reporting that it was strong enough we made up rods and had them tested in the wells.

President.—So far as matches are concerned, I take it that experiments have been purely local.

Mr. Robertson.—Yes, the only person who has done any serious work in experimenting is Mr. Adamjee Hajee Dawood.

Mr. Mathias.—Have you had any request from the Swedish combine to test the wood for the purpose of match making?

Mr. Robertson.—None at all.

President.—In this enquiry we are going into the question of the Swedish Match Company and it is important that nothing should be done which might prejudice the enquiry so far as Government is concerned about concessions or anything else at present, because we don't know what the result of the enquiry might be, but the point is that no difficulties should be created in the interval.

Mr. Robertson.—There is no such thing as a concession in Burma. Any allotment of land or right to work the forest is by tender.

Area of forests in Burma.

President.—What is the total area of the forests in Burma?

Mr. Watson.—I cannot tell you because these statistics have been vitiated. I think it will be about 30,000 sq. miles.

President.—I am not pinning you down to any figures. You can make any modifications you like. The point I want to bring out is that Burma has extensive forests.

Mr. Watson.—Yes.

President.—I am now talking of the reserve forests.

Mr. Watson.—In future I am going to include Federated Shan States.

President.—We may take it then so far as the reserve forests are concerned, it would be about 30,000 sq. miles.

Mr. Watson.—Yes, including the Federated Shan States.

Dr. Matthai.—What is the figure for Shan States?

Mr. Watson.—The figures are 28,500 square miles in Burma and about 2,000 square miles in Shan States.

Dr. Matthai.—The classified forests are not much bigger.

Mr. Watson.—The unclassified forest between Burma and Federated Shan States is about 150,000 square miles.

President.—For these purposes, I think it is just as well to exclude the unclassified forests.

Mr. Robertson.—I think we will have to. Of course I think they will be a source of supply for some years.

President.—You cannot calculate what it means.

Mr. Robertson.—There is no means as regards that.

President.—You can simply say that there may be a certain quantity available, the quantity being unknown.

Mr. Watson.—There are large areas which have not yet been tapped.

President.—In Lower Burma how many circles are there?

Mr. Robertson.—Lower Burma is divided into four circles.

President.—I take it the nearest from Rangoon would be the Hlaing Circle.

Mr. Robertson.—Yes.

President.—Sittang Circle is another.

Mr. Robertson.—There is one circle on each side of the Pegu Yoma. Then there is the Tenasserim Circle for Moulmein and there is the Delta Circle.

President.—Are there any forests which may be called ever-green forests?

Mr. Robertson.—Yes, there are stretches of ever-green forests.

President.—I understood that the Insein Division has large areas of ever-green forests.

Mr. Robertson.—Yes.

President.—Those would be the areas in which the conditions for this class of wood would be favourable.

Mr. Robertson.—Yes, but as far as woods useful for making matches are concerned, I am not certain whether there are not more in the deciduous forests. You have only got '3 of a ton per acre in the Insein forests according to statistics whereas in Mergui and Pyinmana in the drier forests there are the same species yielding '6 of a ton per acre.

President.—That is as regards natural growth. Supposing you were to plant, would it not pay?

Plantations.

Mr. Robertson.—I should find it impossible to say which would be the better forest for these species. I should think the *Bombax* species are probably the easier to plant in a dry area, but I am not certain about that.

President.—So far as the Burma wood is concerned *Bombax* is not the best wood.

Mr. Robertson.—No.

President.—As regards India, it is. The researches up till now so far as they have been done are confined to this *Bombax*, but I think so far as the Burma evidence shows, it is not a good wood for splints at any rate.

Mr. Robertson.—Quite so.

Mr. Watson. There are only a few species—about five—that these people definitely accept.

President.—It is better for me to tell you that there are about 10 species which have been approved by Adamjee's to be good.

Mr. Robertson.—In that list which was published all the scientific names are entirely wrong.

President.—I should like you to correct these names (handed the list).

Mr. Robertson.—Yes.

Dr. Matthai.—Do they have different botanical names?

Mr. Watson.—They don't have different botanical names. They have only different local vernacular names.

President.—I have drawn Adamjee's attention to the fact that they have already got these ten species and it is no use their saying that there are many other varieties available unless they get something else which is far superior to any of these ten species already tried.

Mr. Robertson.—They are probably right on the species. It is very much a matter of spotting the winner.

Mr. Mathias.—The probability is rather against any better species being found.

Mr. Watson.—You can't say that. Some of the forests have not been tapped at all. The forest down on the Tenasserim side which is entirely different from the ever-green in Insein has not been tapped.

Mr. Mathias.—The present ones are those that they have tried and they are the ones that they ought to stick to.

Mr. Watson.—Yes, so long as they can get them.

President.—As far as communication is concerned, which circle do you recommend as the most suitable?

Mr. Watson.—Hlaing on the west side of the Yoma. Extraction is only possible in the north of Toungoo.

President.—Pyinmana and Toungoo are on the same line.

Mr. Robertson.—They march on each other.

President.—Who are the officers in charge of those forests?

Mr. Watson.—The Conservator of Forests, Hlaing Circle, is Mr. Barrington and the Conservator of Forests, Sittang Circle is Mr. Collings.

President.—Sittang is in the Tenasserim Circle, is it not?

Mr. Watson.—It is in another circle. As regards planting, I think that if we did experimental planting we should begin with Insein but there is another factor involved which may knock out Insein, viz., we would have to consider the suitability of the soil, the supply of labour and the possibilities of getting suitable land outside reserve forests which would apply especially to areas along the Irrawaddy above Mandalay.

President.—I was thinking of the Hlaing Circle. Let us take that Circle because it contains 1,300,000 acres of reserve forests.

Mr. Watson.—Most of that is inaccessible.

President.—The Insein Division itself is about 331,000 acres.

Mr. Watson.—Yes.

President.—The area required would be very big.

Mr. Watson.—The thing is that it will have to be accessible that is the main point. Whilst it would not be very big, it is impossible to get it in other than patches.

President.—Just now?

Mr. Watson.—Not only now but at any time. It cannot be done. The soil does not allow it. We can only plant on the valleys.

Dr. Matthai.—Is it a hilly area?

Mr. Watson.—Yes, all the forests of Burma are hilly. I doubt whether it would be an economic proposition to try and plant there.

Mr. Mathias.—Does that apply to all species, even to matchwood.

Mr. Watson.—I believe it applies to all species. I know that our experience has been that when we get on to poorer soil, the growth is slow and stunted.

Mr. Mathias.—What is the total area of the Paunglin and Mahuya reserves?

Mr. Watson.—I cannot tell you off-hand.

President.—I understand that the Okkan reserve is fairly suitable.

Mr. Watson.—It would not pay them to work so far away. If they work at all, they would have to depend on carting rather than floating.

Mr. Robertson.—They could not float the timber from Okkan because it would deteriorate.

President.—They will have to drag it out of the forest.

Mr. Watson.—If they were working in that area, they would have a cart road up to the railway head. The shorter the track the cheaper will be the cost of extraction.

Mr. Robertson.—The railway line runs fairly close. I think that in the Okkan Reserve they have only to do 10 miles by the cart road to reach the railway line.

President.—That is not very much.

Mr. Watson.—No.

President.—I wish to know whether sufficient area would be available in that part of the country (shewn the map).

Mr. Watson.—Yes, but the whole thing would have to be examined because there are other interests involved in this.

President.—Taking the whole of India's requirements, it would come to about 120,000 tons. Of course if the business develops, it would be more. For that you require how much land?

Mr. Watson.—100,000 acres of suitable soil, which would have to be spread over 300,000 acres of reserve forest. I assume that in no forest more than 30 per cent. is suitable for planting.

President.—That area is a good deal more than that.

Mr. Watson.—Yes.

President.—What I am trying to suggest is that if you can produce the whole of that quantity in this area, it is no use tying yourself up to Pynmana.

Mr. Watson.—It would involve a thorough examination and I think it is better to attempt at three centres, because if you had a centre at S..... you would have to go up and if you moved up there, it would come to about 30 miles. The carting would have to be over a longer distance and consequently the cost of extraction would be more.

Mr. Mathias.—There will be streams in that part of the country.

Mr. Watson.—They are of no use.

President.—In the area which is now being worked by Adamjee he says that so far as the wet months are concerned, he has only to drag for about a mile to the water head and from there it comes down by water. As regards the dry season I think he has to cart it to Hleghu. If you selected that area, it would be merely a question of connecting this up by road or a light railway.

Mr. Watson.—That would be about 20 or 30 miles.

President.—We have not got any data. We should like you as far as possible to give us such information as you can.

Mr. Watson.—We could give you no reliable information unless we had a man on special duty to examine the whole thing for over a year. Even then he would not be able to give you any information about the cost of planting. He could only tell you the suitable areas where planting could be done.

President.—In the meanwhile we have to consider the question whether, pending any special measures, you would have sufficient supply available in all the different forests.

Mr. Watson.—I think that there would be a sufficient supply to keep them going for the next 10 or possibly even 20 years.

Dr. Matthai.—That is between 15,000 to 20,000 tons a year. Do you think they will be able to get that for 10 or 20 years?

Mr. Watson.—I should think so.

Dr. Matthai.—What they do now this. They have got about 3,700 tons from their forest reserve, and they got about 1,700 tons from the Andamans and the rest in small quantities from all over Burma.

Mr. Watson.—When I say they would be able to get it, I mean their being able to buy it from all over Burma instead of depending on their reserves. I do not say for one moment that it will be easy to get it although I think the potential supply of Burma would be within that.

Mr. Mathias.—Then you see no possibility of Burma supplying India? As the President pointed out to you just now, the total requirements for India and Burma are 100,000 tons.

Mr. Watson.—Without planting we cannot do it.

Mr. Mathias.—I mean when you have planted?

Mr. Watson.—It depends entirely on the areas we can put under plantation.

Mr. Mathias.—Would it be an economical proposition?

Mr. Watson.—I don't think it will be nearly as economical as in the case of teak.

Mr. Mathias.—Supposing it fetches Rs. 50 or 60 a ton more in Calcutta?

Mr. Robertson.—The freight to Calcutta amounts to Rs. 53 a ton.

Mr. Mathias.—So that you will have to supply f.o.b. at somewhere about Rs. 33 to Rs. 35?

Mr. Watson.—You are roughly asking us to put under plantation what we are at present doing, namely 4,000 acres a year. That is roughly the acreage planted in Burma, and it is very very rash to rush a plantation. It may be entirely wiped out by insects.

Mr. Mathias.—Are these particular trees more liable to insect attack than hard trees?

Mr. Watson.—One never knows what is going to happen when you plant trees under artificial conditions as we find in the case of teak in our teak plantations. Many of the trees are useless.

Mr. Mathias.—Would it be necessary to adopt a clear felling system? Would it be possible instead of planting to extract the hard wood in those areas in which match wood grows satisfactorily and then allow the match wood to propagate by natural regeneration?

Mr. Watson.—We do not always cut them off. We keep them.....

Mr. Mathias.—Even if you clear off everything else?

Mr. Watson.—It will be a very slow process if you clear off everything and just leave the matchwood, I don't think you would get any match wood at all. You won't have full regeneration.

Mr. Mathias.—What I was suggesting was this, that after a contractor had extracted the match wood available in a particular coupe, Government would then work that coupe departmentally and extract the other wood.

Mr. Watson.—That is what happens now in the Insein area. The contractors cut and take out everything.

Mr. Mathias.—Not only trees of fellable girth but also small trees?

Mr. Robertson.—We do not allow them to cut below 3 feet. If we did that they would probably clear the whole thing out, and other species which are not suitable for matchwood would grow there.

Mr. Watson.—I saw an area in the Insein division the other day where they had done something like that, and though there was no bamboo in the forest, it has got bamboo all over there now.

President.—In these two circles, Sittang circle and Hlaing circle, you have got between the two nearly 4 million acres?

Mr. Watson.—But most of it is inaccessible to anything but teak.

President.—It does not seem to me that there will be much difficulty in finding 100,000 acres of suitable land for matchwood out of 4 million acres.

Mr. Watson.—The first thing we have got to consider is that the acreage has already got a growth of timber which is of market value, and we at present plant roughly 4,500 acres in the two circles. Our planting operations are frequently delayed because the contractors will not go ahead with the extraction of the trees in those 4,000 acres.

President.—Supposing you selected the Insein division, would it not be feasible to get as much clearing done as possible in that area and go on with the planting?

Mr. Watson.—Insein division has not got the factors necessary to get the clearing done or even all the factors necessary to get the planting done.

President.—That is to say planting labour is not available?

Mr. Watson.—That is so, or if it available, it is very scanty.

Dr. Matthai.—You mean you have not got people to do the work in the forest areas. If you do plantation work where would you get your labour from?

Mr. Watson.—We get our labour from shifting cultivators. They put in the plants at the same time as they are sowing their crops.

Dr. Matthai.—You have that difficulty in Insein?

Mr. Watson.—Yes, and that makes planting an uneconomic proposition.

Mr. Mathias.—Have you any system of establishing forest villages for the supply of labour?

Mr. Watson.—We have not succeeded in getting villagers to move from their own districts.

Mr. Robertson.—In most cases there is a big demand for local labour on the spot.

Mr. Watson.—It sometimes happens that we do get together a forest village. They carry on the work for sometime, but as soon as they are a little better off, they clear off and go to some other place.

Mr. Mathias.—Have you not got any aboriginal tribes near your forests?

Mr. Watson.—We have aboriginal tribes in the forests, but they won't work. We get the work done by the Burmans living on the edge of the forests. The average Burman will not work; he will not even plant on rare occasions.

Dr. Matthai.—The people who practise shifting cultivation are generally Burmans, they are not Indians, are they?

Mr. Watson.—None except those on the Arracan border. Of the people that practise shifting cultivation there are probably very few are Burmans; they are all hill tribes up in the north and down south they are Karens. In the Pegu Yomas I think we have about 1,000 square miles in the hands of these people who carry on shifting cultivation, and none of these people will plant. I think there is a population of about 1,500 people in the Pegu Yomas and none of them will do any work.

President.—I think it is a thing worth looking into from the forest point of view.

Mr. Watson.—My point is that it is a thing which will have to be very carefully examined.

President.—After all it is a comparatively small area compared to what you have got.

Mr. Watson.—We have with the greatest difficulty worked up to planting 4,000 acres a year and I should think it would be a very very risky operation to go in for plantation on a larger scale without extensive experiments.

Mr. Robertson.—If you want to double your areas fairly rapidly you have to go in for imported labour and I very much doubt if you could grow the stuff at a profit.

Mr. Watson.—It depends entirely on the cost of planting. I tried to work it out the other day. It depends entirely on the financial cost of planting and the period it takes to develop a plantation.

President.—Just now there is a good deal of evidence to suggest that this match making wood is getting exhausted in most parts and therefore, as I said, from our point of view it is a very big proposition in this sense that to-day, for instance, Sweden has to import from Siberia and other places and they have paid as much as Rs. 120 a ton. Up to now they have not looked upon Indian wood because the idea has been that that wood is not suitable for making matches. But if the quality of the Indian wood is established it means a tremendous amount of business for Burma, and it is for that reason that we are very anxious that the forest authorities should examine the question. I have given you India's demand, but that is not the limit of the market.

Mr. Watson.—I think it would be a very sound thing to examine the question, but it would be a very unsound thing to rush into plantation without making experiments and getting sufficient proof behind it.

President.—That goes without saying, but we should like to see in what way we could make our proposals so that it may become easier for the forest authorities to carry on the experiments.

Mr. Watson.—I think the proposal should be that the forest department should examine the possibility of finding out suitable areas for planting matchwood inside the reserve forests and also the question of taking suitable lands on the banks of the rivers.

President.—We thought you found the soil suitable?

Mr. Watson.—I mean the whole question of taking lands outside the reserves.

Mr. Mathias.—Are the lands on the river banks suitable for other trees besides letpan?—For instance sawbya?

Mr. Watson.—We do not know anything about it.

Mr. Robertson.—That is a pure ever-green type. Naturally it will grow on the hills, where the forest is of ever-green type.

Mr. Mathias.—It is a matter of some importance as regards the Insein Division, because as Mr. Watson was saying, the area on which letpan would grow is limited. If we found that sawbya would grow on the hills, that would increase your output.

Mr. Robertson.—That is just so long as you can keep the ever-green type growing. But when you start planting, with clear cutting and burning, you very often find another type coming in and if you don't restore it to the ever-green condition everything will be spoiled.

President.—That type may or may not suit the match people?

Mr. Watson.—That is so.

President.—Do I understand you to mean then that if you undertake planting, it might prove after 5 or 10 years when your tree is growing up, entirely unsuited for match making.

Mr. Robertson.—You take a case of a tree that regenerates itself normally in real ever-green conditions. If you start clear felling and burning, by exposing those trees to strong sunlight and dry air, instead of the steady and moist condition in which they naturally grow, you may find that it would refuse to grow at all.

Dr. Matthai.—And different species might take its place altogether?

Mr. Robertson.—Yes; perfectly worthless species might come in and you may have to destroy them as weeds. The match wood may get along but they would not grow as they would in their natural condition.

Mr. Mathias.—As regards maulettanshe does it grow along the river banks? And what about didu?

Mr. Robertson.—They grow on the hills.

Mr. Mathias.—And gwe?

Mr. Robertson.—That is pretty well scattered all over. I do not think we have gwe on river banks.

President.—What about bonmeza?

Mr. Robertson.—They will grow anywhere.

President.—That is said to be the best because it is suitable for all the things, splints, veneers and so on.

Mr. Mathias.—So that riverain portions will have three species of match wood—bonmeza, letpan and maulettanshe?

Mr. Robertson.—Maulettanshe you will find in the deciduous forest not so much in the pure ever-green. You do find a certain amount in the alluvium banks in the valleys; you sometimes find a very good crop coming up, but often only in patches of half an acre or so.

Available supplies of match wood trees.

President.—Would it be possible for you to give us a very rough calculation as to the present available sources of supply in the province of the various woods suitable for match making? You have made enumerations in the Insein division. Would it possible for you to take a certain number of compartments and calculate on some sort of rough basis for other forests?

Mr. Robertson.—The Insein enumerations were based on the result of a working party having worked there for a whole year. They were looking into species other than matchwoods. I have got some results for part of Mergui and part of Pymmana. These species were scattered through the forests all over Burma. The tonnage per acre will rarely reach one ton and will average $\frac{1}{2}$ to $\frac{3}{4}$ of a ton. In the ever-green we had certain other species of match woods and we got .3 ton an acre altogether.

President.—That is 112,000 tons are available at the present moment.

Mr. Robertson.—Yes, if you can get it, but in the greater part of the forests it won't pay anybody to extract.

President.—We are very anxious first of all—apart from the question of the industry—the possibility of the Burma forests should be ascertained. For that reason it is very important just now to ascertain roughly what supply is available in the accessible forests at a particular price say Rs. 35 or Rs. 40 delivered in Rangoon. Can you give us a rough calculation?

Mr. Watson.—I could not. I don't think anybody could.

Mr. Robertson.—You have got to start off by taking your reserves and working out what is accessible to even the roughest cart tracks. That is the limit of accessibility. After you have marked off that area, you have got to sort out again the areas in which these species grow at all. If you check this on the map, you find yourself cut down to 40,000 acres within the accessible limit. You have then got to find out the patches of forests where no match wood grows at all, and deduct them, otherwise you would get misleading figures.

President.—You have got now more or less the rough calculations of 4 areas.

Mr. Robertson.—Those are simply working plan figures. They don't take into account the question of accessibility. If you say two-thirds of the area are inaccessible, it doesn't mean that the remaining one-third will still have the same proportion of match woods as the whole area. It may be an entirely different type of forest where different species grow.

Mr. Mathias.—May I ask whether you have any plans to develop communications within the next 10 years?

Mr. Robertson.—Each division has a road plan. But we have not been able to do very much in the way of road work.

Mr. Mathias.—What I mean is that under the Government borrowing rules provided the work is productive, Government can borrow for it. Has any scheme been drawn up by the forests showing that on the construction of such and such a road the improvement would result in such and such a better price being obtained for timber? Has any programme been drawn on those lines for borrowing with a view to improve the communications of the Forests Department?

Mr. Robertson.—We have a road programme for the province and we have no difficulty in getting funds for it. But we are beginning with no roads, so we have to proceed slowly.

Mr. Mathias.—The order in which you are constructing your roads will be according to the increase in the value of forest produce which you will get.

Mr. Robertson.—Yes.

Mr. Mathias.—That is to say the roads that would give you the best return will be constructed first.

Mr. Robertson.—Yes.

Mr. Mathias.—I understand there is no difficulty about funds at all.

Mr. Robertson.—No.

Mr. Mathias.—Because your programme is a limited one.

Mr. Robertson.—Our trouble at present is the shortage of men.

Mr. Mathias.—You have no scheme for a system of forest tramways.

Mr. Robertson.—It won't be worth while doing, because taking our stock of available timber, the stuff worth taking to a saw mill would not be more than 6 to 7 tons in the acre. I estimate that for the construction of a tramway, it would be necessary that we should get 20 tons an acre.

President.—These are the 4 divisions in which you made those calculations.

Mr. Robertson.—Yes. These are the only divisions in which we have actual figures for match woods.

President.—Between them they have got about 300,000 tons.

Mr. Robertson.—Yes, but the trouble is the cost of extraction of isolated trees at the rate of one tree an acre. That is where the trouble comes.

President.—At present they are doing one tree an acre in this Insein Division and we know their costs.

Mr. Robertson.—Yes. It is one tree an acre in the accessible parts of Mahuya. But farther they go the greater will be the cost of extraction.

President.—They work the compartments in such a way that they don't think the cost would go up.

Mr. Robertson.—Mahuya is rather in a peculiar circumstance. It is probably one of the easiest area to extract match wood from in Burma.

President.—They don't find Paunglin to be always inaccessible.

Mr. Robertson.—It is a very large flat country and consequently comparatively easy to work.

President.—There is that area.

Mr. Robertson.—That is probably the biggest area in Burma for growing match wood.

President.—Supposing the planted tree does nearly as well as the natural tree, that area furnishes the best possibilities.

Mr. Robertson.—Undoubtedly it is the most suitable for match wood.

President.—Do these two areas, Paunglin and Mahuya reserves contain more expensive classes of wood?

Mr. Robertson.—They have got a very large amount of Pyinmana?

President.—What is that used for?

Mr. Robertson.—For house building, planking work.

President.—What is the market value of that?

Mr. Robertson.—About Rs. 45 a ton.

President.—That is a little more than the match wood. What I am trying to ask is whether it is possible to work these forests because of the other classes of wood and plant in the Paunglin reserve.

Mr. Robertson.—That means to organising something to take up all the other species as well. Pyinmana and Kanyin are the two principal trees.

President.—It would not be very difficult to secure a market for these.

Mr. Robertson.—The market is such a very sensitive thing. Here you have competition in the Rangoon market. In the case of timber like Kanyin you have competition right across from Mergui in the Tenasserim Division. It is the slight difference of a rupee per ton in the cost of working a tree like Kanyin in the Mahuya which is floated with bamboos which affects the market for or against. If they can get timber from Mergui a rupee per ton cheaper than from the Mahuya you are left with the Mahuya timber standing for the next 20 years until the prices stiffen up.

Mr. Mathias.—At the present market rates it is a good proposition to extract hard timber.

Mr. Robertson.—Yes, if you can get the local contractors to take it up.

Mr. Mathias.—You don't do departmental work.

Mr. Robertson.—No. Practically the departmental extraction of hard wood is only for experimental purposes.

President.—It is an experimental work.

Mr. Robertson.—Government may lose a lot of money. If you declare that you are going to plant, it means putting on the market anything like 1,000 departmentally tons and Government may lose Rs. 5 or Rs. 6 a ton on that.

President.—It is not a very big sum. Supposing we were satisfied from the larger point of view that this thing was well worth doing not only in the interests of this industry, but in the interests of Burma, then it is not a big amount of expenditure.

Mr. Mathias.—If you look at it from both sides, you may be losing Rs. 5,000 on the one side and you may be gaining by the sale of match timber on the other side.

Mr. Robertson.—If it is a drop of Rs. 5,000 we could afford it, but the position as regards extraction of timber other than teak in Burma is that many people have tried on a large scale and I know of no one on a large scale who has made it pay.

Mr. Mathias.—Before any considerable number of match factories existed.

Mr. Robertson.—No, at the present moment.

Mr. Mathias.—You know of some recent attempts to put it on the market.

Mr. Robertson.—Not match wood necessarily, but the firms that are extracting all species on a large scale have found that it doesn't pay. If you like, you may cross-examine Steel Brothers who extract on a large scale and who are in an exceptionally favourable position, because they have purchased the rail road from their predecessor. The whole result of their experience has been to show that extraction of timber other than teak can only be undertaken by the petty man on a small scale working from hand to mouth. The whole reason for that is the low marketable tonnage.

President.—In this reserve area how much of marketable timber will there be other than match wood?

Mr. Robertson.—I have not got figures with me, but it is probably on the analogy of other forests not more than 5 to 6 tons to an acre and that would not pay for extraction on a large scale.

President.—From that wood how much would Government expect to get by way of royalty?

Mr. Robertson.—That would be a matter for tender.

President.—Ordinarily what is the rate Government expects from these classes of wood.

Mr. Robertson.—I should say Rs. 5 a ton. I could not imagine anybody taking it on if you put those forests up to tender.

President.—The point is that you selected this area for plantation.

Mr. Robertson.—A planted area would be a different proposition. If you have 25 tons an acre, it would be done with profit.

President.—I am talking of clearing the forests. There are certain classes of match woods.

Mr. Robertson.—You want to clear off the other forests.

President.—Yes.

Mr. Robertson.—I don't think you will get anybody to take it up.

President.—To clear up.

Mr. Robertson.—To clear up and burn them.

President.—You can sell them as fuel.

Mr. Robertson.—It would not pay to extract and sell as fuel.

President.—What will be the cost supposing anybody took it up to clear and burn the thing?

Mr. Robertson.—I don't think we have any actual figures because we don't do it departmentally. I should say it would be in the neighbourhood of Rs. 30 an acre and then the planting would be more. Then you would have to plant and you would have to tend.

President.—Supposing it costs you Rs. 30 an acre to do it, you would add to it the cost of planting.

Mr. Robertson.—Another Rs. 30 to plant and then you would have to take the question of policy as to whether it would be in the interests of Government to cut down all trees that might have a value or will probably have a value 30 years hence.

President.—That of course is a different thing. Supposing it is found that it is worth while for Burma to go in for this class of wood on a large

scale and if you are experimenting even an expenditure of Rs. 20 or 25 lakhs is not a big thing.

Mr. Watson.—I quite agree if there is anything to come back.

Estimate of plantation costs.

President.—What I suggest is: would it be possible for you to give an estimate for clearing the area and planting?

Mr. Watson.—It would be perfectly possible to work out the cost of clearing the area and planting. If I were to plant, I should do it in some other area near the railway line.

President.—What other area is there which would give you 100,000 tons to start with?

Mr. Watson.—We could organise the planting. The first thing to do would be to select suitable areas and work out the finance of it.

President.—I agree, but we cannot do it. I was simply giving this area as an illustration. Take any area which you think would be suitable. We only want a complete estimate.

Mr. Watson.—I would confine the planting operations to an area from which we could have marketable timber extracted and brought to the market. That is my point.

President.—That would be better still. As regards the areas for which you have given estimates, that contemplates ready-made soil.

Mr. Watson.—Yes.

President.—I think that that is a different thing from this. What we want is: supposing you are given *carte blanche* and you are told that Burma has got to create this 100,000 tons, what is the cheapest way in which you can do it?

Mr. Watson.—I should concentrate on that problem and would probably be in a position to give you an answer after 20 years and not a day earlier. I have seen many optimistic estimates going wrong and personally I would not risk an answer at present.

President.—You may be going a little the other way this time in taking a too pessimistic view of the problem. The idea is that Government like anybody else must take a reasonable view of the situation. You are talking of conditions under which no risk is taken. I say that Government must take the ordinary business risk and then go in for that. After 20 years or so, you might give us information that was positively perfect.

Mr. Watson.—It might be positively against it! That apart, if we are to undertake plantation we would have to work, say, 4,000 acres a year. But we could not get the 4,000 acres cleared in time to be planted. The cost of planting is in the neighbourhood of Rs. 30 per acre.

Mr. Mathias.—How much could you plant?

Mr. Watson.—The present planting is just about 5,000 acres a year.

Mr. Mathias.—Could you do that?

Mr. Watson.—I should strongly advise to. We could, if we were told, divert about 1,000 acres for match wood.

Mr. Mathias.—If you reserve some area for planting match wood, you will have to reduce your teak planted area by so much.

Mr. Watson.—Yes.

Mr. Robertson.—It will be somewhat like the rubber plantation.

Mr. Mathias.—Have you got any information regarding the cost of plantation?

Mr. Robertson.—We could get it easily. Our cost of planting where we have not had the shifting cultivator to work for us has been anything up to Rs. 150 an acre. Then we had to do the departmental clearing and the departmental planting. I am not sure but I think that rubber planting would be much the same.

Dr. Matthai.—I find that according to your statement Rs. 120 will bring in a royalty of Rs. 11 on 25 years rotation.

Mr. Watson.—Assuming that the estimate of the outturn is correct, I think that it would be a paying proposition.

Dr. Matthai.—They are paying Rs. 12-8-0 at present per ton as royalty. If you had to spend Rs. 120 per acre as the cost of formation, etc., and the royalty came to Rs. 12-0-0 it would not be any more expensive than it is.

Mr. Watson.—That is so.

President.—In fact it may work out more.

Mr. Watson.—This is only an estimate.

Mr. Mathias.—That is planting under normal conditions, is it not?

Mr. Watson.—If you take Rs. 120 per acre, it will allow for abnormal conditions.

Dr. Matthai.—As regards Rs. 120, you assume that there is no shifting cultivation in that area.

Mr. Watson.—Yes. Of course to do this we would require special staff. We are not staffed to do that.

Mr. Mathias.—On your calculations, it would be a small margin of profit of one rupee a ton.

Dr. Matthai.—Your cost *plus* interest and nothing more than that.

Mr. Watson.—We get nothing more than 4 per cent. I don't think that even the teak plantations pay us more than 4 per cent.

Dr. Matthai.—Do you get your cost back?

Mr. Watson.—Yes and 4 per cent. compound interest.

Mr. Mathias.—Your cost is Rs. 10-8-0 and you will be getting Rs. 12-8-0. That means two rupees a ton which will be more than 4 per cent.

Mr. Watson.—Rs. 10-8-0 includes the 4 per cent.

Mr. Mathias.—Then it will be about 20 per cent.

Mr. Watson.—I don't think that any planting operations will give more than 4 per cent. compound interest. Take our planting operations. I don't believe that our teak planting operations are going to give more than 4 per cent. compound interest.

President.—What is the profit that Government expect from teak?

Mr. Watson.—They have never said anything; nor have they laid down anything. It is a question which they have not considered.

President.—On an average what is the net profit that they make now?

Mr. Watson.—We have not had any teak plantations bearing any yield. The teak plantation takes 100 years and the Forest Department has been in existence for the last 70 years only. As a matter of fact we have got a few acres where trees have fully grown to size. They are not as good as they should be. I calculated some time back that these older plantations gave about 4 per cent. compound interest.

Dr. Matthai.—Your point is this. Supposing you are able to get a return of 4 per cent. compound interest—whatever be the cost of plantation and formation—then from the forest point of view it is a reasonable proposition.

Mr. Watson.—Yes. I would even go further and say that it is better irrespective of the cost. We want growth on the land. I did this calculation on your request to the best of my ability on assumed data.

Mr. Mathias.—I take it that Government might reasonably expect from these forest resources to get a rate rather in excess of the current rate of interest at which they could borrow. The policy I take it is somewhat similar to that adopted in the Irrigation Department. Should the profit work out at about 6 per cent.?

Mr. Watson.—6 per cent. on planting we could never get. The European forestry allows only for a profit of 2½ per cent.

Mr. Robertson.—The suitable rate of interest will probably be one per cent. over the Government rate, according to European principles.

Mr. Mathias.—It works out somewhere near 6 per cent. According to your calculation it is something like 20 per cent.

Mr. Watson.—No. The Board asked me for a calculation on the finance of a plantation on the lines of the one in Troup's book. I made the calculation to the best of my ability showing what the reasonable from planting might be expected to be.

Mr. Mathias.—That comes to Rs. 10-8-0, after 15 years.

Mr. Watson.—If we got a royalty of Rs. 10-8-0 it would mean that the money put in had yielded about 4 per cent.

Mr. Mathias.—If you get Rs. 12-8-0 as at present, you will be making a handsome profit.

Mr. Watson.—Yes.

President.—To-day they pay you a royalty of Rs. 12-8-0 per ton for trees which are growing naturally and those trees may not be as accessible as you may make them if you undertake plantation. You may be able to get even a higher royalty provided the cost of extraction and transportation is reasonable. That is the advantage in a plantation which the natural forests don't have.

Mr. Watson.—I quite agree. I am in favour of doing it. When you speak of a royalty of Rs. 12-8-0, we have got that tendered for the particular forests whereas in the case of the other forests which we have put up we have been offered a royalty of only Rs. 4.

President.—If you were planting you would naturally select areas which would be more accessible than those natural forests and therefore it might pay a man to give you a royalty of Rs. 12-8-0 or even Rs. 15.

Mr. Watson.—Yes.

President.—Therefore from the Government point of view whatever they get in excess of Rs. 10 would be to their interests.

Mr. Watson.—Yes.

President.—Four per cent. compound interest after all is not bad.

Mr. Watson.—It is very good over a series of years.

President.—It might mean more than 5 per cent. simple interest.

Mr. Watson.—Yes. In forest plantation we might almost rule out the question of interest because we would help to replace the stock on the ground.

President.—Your royalty would not be determined by the cost of plantation but by the accessibility of the forest.

Mr. Watson.—That is the point.

President.—To-day you may get Rs. 12-8-0 and it may be raised to something higher if the forest is accessible.

Mr. Watson.—Yes.

Dr. Matthai.—For a more accessible block in the same reserve you had another tender which you accepted recently for Rs. 6.

Mr. Watson.—It was another reserve.

Dr. Matthai.—Was that from a match factory?

Mr. Watson.—I am not certain but I think it was from the same man.

Dr. Matthai.—It has been accepted by the Forest Department.

Mr. Watson.—It is before Government at present.

Rates of growth.

President.—When you are planting I want to know whether you will have to wait until the trees have reached their full girth before you can tell that the plantation has succeeded or can you say after two or three years whether it is doing reasonably well.

Mr. Watson.—They generally do very well in the first ten years and after that something happens.

President.—What happens?

Mr. Watson.—The growth goes wrong. In our teak plantations the trees grow beautifully for ten years and then something happens with the result the growth goes wrong. We might get insects or something else. So many things happen.

President.—I think that the plantation undertaken now by Government is teak.

Mr. Watson.—We have got plantations for other species also. Up till about ten years ago, we planted nothing but teak. Now we are planting extensively Pyinkado and other species.

President.—How many years does Pyinkado take to grow?

Mr. Watson.—We do not know.

President.—I see from one of the papers you have submitted that you have been planting Letpan.

Mr. Watson.—Only on a very small experimental scale. We had a lot, but most of that was washed out by the floods.

President.—In eight years, it will attain a girth of about 15 inches in diameter.

Mr. Watson.—We may get it in eight years on good soil.

Mr. Mathias.—Would any experiments carried out in India be a guide for similar growth in Burma?

Mr. Watson.—I should not think so. It would be a guidance as regards the method of tendering but not as regards the result or rate of growth.

President.—Supposing we accept your figures as regards cost the next question that remains is the selection of areas. I think taking a reasonable view you may be able to suggest areas in which this may be undertaken.

Mr. Watson.—I should say straightaway that our first experiments would be undertaken partly on the banks of the Irrawaddy and partly in conjunction with our other plantations. We would take part of the areas which we are planting in Toungoo.

President.—I take it that Sawbya does not grow in the riverine areas.

Mr. Watson.—No.

President.—As regards riverine areas the trees that matter most are Bonmeza, Gwe and Maulettanshe. Adamjees say one of the best woods is Setkadon.

Mr. Watson.—It only grows on the banks of rivers and on the edge of evergreens. It also grows in strips in more moist valleys.

President.—This maulettanshe does it generally grow anywhere? Messrs. Adamjees consider this as one of the best matchwoods.

Mr. Watson.—It only grows along the river banks and on the edge of evergreen forests. Any experiment in plantation will have to be made in a very moist climate.

Dr. Matthai.—We saw a few at Mandalay I think.

Mr. Robertson.—They might be growing along some of the river banks.

President.—There are a lot of Yamane?

Mr. Robertson.—These are very much subject to insect attack.

President.—These are the 10 species of trees which we have to bear in mind.

Mr. Watson.—Yes, because the first thing for us to know is the species you want us to plant and then experiment on them. As regards experiment I should say that we would experiment at our various planting centres, viz.: Tharrawady, Sagaing, Toungoo and Kemendine.

Mr. Mathias.—How long would it take you to know the result of the experiments?

Mr. Watson.—I should say 10 years, but personally I should think it would take longer: I should not hope for any results before 20 years.

Mr. Robertson.—In the first five years we would expect to see definitely whether they would grow with any chance of success and at the end of 10 years we should be able to give you an idea of what results we might expect, but on the whole it is a very doubtful problem, whether even at the end of 10 years we could do that.

President.—Then there is this pine.

Mr. Watson.—The pine grows naturally and would not be planted. There are considerable quantities of it north of Kalaw in the Federated Shan States. There would be no difficulty.

President.—Are there very large quantities?

Mr. Robertson.—Comparatively large quantities.

President.—There are tremendous quantities as far as I can remember between Kalaw and right up to Taunggyi?

Mr. Robertson.—You see quite a number of patches but the total tonnage as Mr. Cochrane worked this out, is on the basis of 1,000 tons a year, so that you will have the whole lot out in one year.

President.—Where are the larger quantities?

Mr. Robertson.—In the part running north of Kalaw. It is not pine right through. You have 20 miles right through of the biggest solid block of pine forest which starts about 20 miles north of Mōng Pawn beyond Pang-long. They are quite out of reach.

President.—How far is it from Taunggyi?

Mr. Robertson.—That is about 50 miles.

President.—So that the accessible quantities are really small?

Mr. Robertson.—Yes.

President.—What is the workable tonnage?

Mr. Robertson.—I should think if you get 1,000 tons a year you would be lucky. A lot of the pine is full of knots and the complaint we have about it is that the knots are very resinous and even if you can get the cutters through the knots you have got to cut wide strips across the veneers in order to cut out the knots so that there is a big proportion of wastage on account of the knots.

Dr. Matthai.—One of the people who came to give evidence said that if they worked on the Japanese machine, where you do the grooving separately, it would not be quite so difficult to work on the nodes and pick them out.

Mr. Mathias.—Mr. Bawaney told us that provided it was boiled first, there would be no difficulty in utilizing the pine for splints.

Mr. Robertson.—Another difficulty with pine is that you get more growth of branches in the lower parts when it is planted.

Dr. Matthai.—Is the pine wood here different from European pine wood?

Mr. Robertson.—It is a different class of pine but there is not very much difference in the wood.

President.—I think you have given me these three or four areas.

Mr. Watson.—Our main planting areas are north of Toungoo, Tharra-wady, Sagaing and Kemendine and we are trying to make a start in Pyin-mana and Insein. We should experiment in these six centres.

President.—Mr. Bawaney gave us a list of the places from where he brought his wood and he told us that he got considerable quantities from Martaban; then he also got some from Toungoo.

Mr. Watson.—We might also plant in Martaban. As a matter of fact we would try planting everywhere, say, Prome for instance.

President.—Adamjees have got a big lot from the Prome division.

Mr. Watson.—Yes. But I have given you the five most important centres.

President.—Then they also got a little from Mandalay. Of course the biggest lot they got was from Wanetchaung and other places. This will give you an idea of the suitability of the soil so far as natural growth is concerned. The next lot is from his own forest where he got nearly 3,800 tons; then he got large quantities from Port Blair. These areas that you have mentioned will naturally lend themselves to plantation because these trees actually grow there.

Mr. Robertson.—It is really more a question of picking out suitable localities within those areas; that is the difficult part of a big plantation.

President.—Then they have got a little from Toungoo; that shows that trees would grow there.

Mr. Robertson.—That supply might actually have come from an area of 60 or 70 square miles, with the trees dotted here and there.

President.—He got it at the same price so that the cost of extraction could not have been very much higher.

Mr. Robertson.—It is very likely that the supply is practically exhausted.

Mr. Mathias.—I understand in all these reserve forests there is a limit to the cutting to 5' girth. If they cut all trees of 5' girth possibly in ten years' time it will be possible to cut again. Is that correct? Would it take 10 years for the smaller trees to grow?

Mr. Watson.—We reckon 30 years ordinarily for the teak.

Mr. Mathias.—The number of trees already cut is of 5' girth.

Mr. Robertson.—It will sometimes take 10 years to get from 5' to 5' 6".

Mr. Watson.—It grows rapidly to 3' or 4' girth and then the growth is slow.

President.—But 4' would not be an unsuitable girth for match making? It can be worked down to 6".

Mr. Robertson.—I was asking Mr. Bawaney to take smaller girth.

President.—He would naturally select a tree of 5' girth, of course.

Mr. Robertson.—And he was no doubt right because there was less overhead loss on a 5 feet than 3 feet log.

Mr. Mathias.—But if you are going to cut 3' logs which grow very quickly it may mean that the cost of cutting the wood will be very much less than cutting a log of 5' girth.

Mr. Watson.—Yes.

President.—Supposing Messrs. Adamjees got their supplies from these areas every year for 15 years; can that be taken as more or less reasonable?

Mr. Watson.—I would not go as far as that.

Mr. Mathias.—When you carried on your experiments you would naturally also consider from the commercial point of view whether you would consider 3' girth as more remunerative than 5' girth.

Mr. Robertson.—Yes, we should work it out on the various girths and we might find that the money value may come very much below on 3' girth than on 5'.

Dr. Matthai.—From the forest point of view what is the point in fixing a minimum girth?

Mr. Watson.—In the case of matchwood it is entirely arbitrary.

Dr. Matthai.—Generally in your leases people are confined to a particular girth, are they not?

Mr. Watson.—Yes. This works out in the case of teak wood by a calculation as to the quantity of teak and we calculate from those calculations the tonnage or the number of trees that we can take out and still leave the forest with the same yield annually.

Dr. Matthai.—It is a question of regeneration, is it?

Mr. Watson.—It is a question of sustained yield.

President.—Mr. Robertson, you prepared an estimate of the bonmeza?

Mr. Robertson.—I really don't know where those estimates came from. My recollection is that I gave Mr. Bawancy some vague figures in conversation as to what it might cost to form a plantation, but I do think I certainly never said that in 13 years' time the growth would be 7 feet and I am very doubtful if I had said that it would yield 20 tons of timber in 15 years. I was rather horrified to see this statement published!

Dr. Matthai.—Do you entirely repudiate it?

Mr. Robertson.—I certainly never gave it as an official forecast.

Dr. Matthai.—Does bonmeza grow faster than letpan?

Mr. Watson.—I don't think we have any figures of the relative growth of either bonmeza or any other match wood. The only figures we have are for the growth of teak and comparatively few figures for any other species.

Dr. Matthai.—On that point may we accept Mr. Troup's statement? He gives somewhat definite figures.

Mr. Watson.—It seems to have come out to Mr. Robertson's figure but I would certainly not guarantee the trees being 6 feet in 13 years.

Dr. Matthai.—If you look at page 32 of Mr. Troup's book, under (b) Rotation he says "We may assume that the exploitable age should never exceed 30 years and that 25 years will be a fair general average to take."

Mr. Watson.—That depends absolutely on the soil.

President.—That is a kind of tree which so far as present experience goes is not really very suitable?

Mr. Watson.—That is so.

President.—Perhaps 20 years may be taken as a reasonable period for these soft woods?

Mr. Robertson.—20 years for 5 ft. girth. It depends on how you take the 5 ft. In most of these calculated figures the girth is taken at breast height.

President.—What would be the length of the log?

Mr. Robertson.—25 ft. They are going to cut it in small lengths. Girth is a big factor.

President.—It would be at about 12 ft.

Mr. Robertson.—Yes. The midgirth measurement would also be without bark so that 6 ft. breast high girth would give you 5 ft. midgirth log.

Dr. Matthai.—6 ft. including the bark?

Mr. Robertson.—Yes, when it is felled and as he measures it up.

Dr. Matthai.—Can he take it lower than his breast height?

Mr. Robertson.—That is always the accepted standard.

Mr. Mathias.—Actually your forest rules prescribe that the trees should be cut breast high.

Mr. Robertson.—We prescribe that they must not be higher than 3 ft. They are getting down to 2 ft.

Dr. Matthai.—In Germany they tear it out by the roots.

Mr. Robertson.—Yes.

Planting Methods.

President.—As regards planting I want to know a little about the methods you adopt.

Mr. Robertson.—We hand over the area to the cultivators and they put in their crops. Bamboo stakes are set in in rows 6 ft. apart and either a number of seeds or a young plant is put in at each stake at the beginning of the rains. In the following cold weather when the crop is reaped the number of plants are counted and the cutters paid for them. The shifting cultivators are paid according to the success of 10 months' growth. He puts the plants

down in May or June and we may take them over in January or February. We pay him so much per 100 plants. If there was less than 50 per cent. success, he gets nothing. It is of no use to us.

Mr. Mathias.—Why not?

Mr. Robertson.—There is too much trouble in getting the weeds out. No amount of patching will be economical.

Mr. Mathias.—You pay him at a higher rate, the nearer he gets to 100 per cent.

Mr. Robertson.—Yes.

President.—After that the shifting cultivators' work is finished.

Mr. Robertson.—At the beginning of the rains we go and free all these young plants from the weeds.

President.—You have to have salaried men.

Mr. Robertson.—Yes. We may have to weed three times during the first rains after the plants have been put down. In the third year the plants are usually well above the weeds and the only danger is grass. In the third year there is only one weeding and in the fourth year there may be none, but in some cases light weeding is necessary up to the fifth year. When the fifth year comes, it may be necessary to thin out the plantations, to cut out superfluous stems and we do that again every five years. This is of course with teakwood. It might be different with other species.

President.—Then after that they take care of themselves.

Mr. Robertson.—Yes. They are thinned after intervals.

Dr. Matthai.—After the fifth year you have a general sort of supervision and nothing intensive.

Mr. Robertson.—Yes, they may be left alone after 10 years.

President.—As the soft woods grow quicker than teakwoods, it is possible that weeding process might be shortened.

Mr. Watson.—That is very probable.

Mr. Robertson.—That depends on the density and the thickness of the leaves.

Mr. Mathias.—As they grow quicker, the soft woods in three years would grow into double the height and consequently be beyond the influence of weeds.

Mr. Robertson.—Yes.

Dr. Matthai.—You say in your note if you plant letpan on the river side there is the risk of instability of the soil.

Mr. Robertson.—The whole thing may be washed away by the floods.

Dr. Matthai.—Would that danger occur after the 5th year?

Mr. Robertson.—Yes.

Dr. Matthai.—Unless there is a very big flood a tree like bombax after it is grown about 5 years would be able to resist the encroachment of water.

Mr. Robertson.—It may be washed away altogether, soil and everything. If the river leaves its course and takes a bend, it will take everything—even an island of 20 or 30 years old.

President.—It might be possible to avoid selecting those areas.

Mr. Robertson.—Those are areas from which you get fresh alluvium.

President.—Who is the Conservator of Forests, Hlaing Circle?

Mr. Robertson.—Mr. Barrington. He has considerable experience of planting species other than teakwood.

Replies to the Questionnaire.

President.—I take it the information that you have given as regards the Match Industry is mainly derived from Messrs. Adamjee Hajee Dawood chiefly.

Mr. Robertson.—Under what head?

President.—In various cases about the different kinds of wood suitable for manufacturing matches, wages and things like that are mainly derived from local enquiries.

Mr. Watson.—Yes, enquiries were carried out by Mr. Moodie.

President.—There is one point. Mr. Troup has written his report and some people have acted on that report. Now we have to be very careful about what he says. He has given a long list of possible sites, the kinds of wood available, etc. As a matter of fact so far as the woods are concerned, he has not told us anything which is borne out by experience.

Mr. Robertson.—His statement as regards wood is as a result of actual test. There is another thing also. These woods were sent home to a firm in Berlin who made match-making machinery. I think that a greater number of these woods were favourably reported so that their machinery might be sold.

President.—He doesn't mention which of the woods have been found really suitable for match-making. That part of the report is really quite out of date.

Mr. Robertson.—Yes.

Sites for factories.

President.—Then as regards the sites, there are several sites.

Mr. Robertson.—It boils down to Mandalay and Moulmein.

President.—As regards Mandalay he has given a long list. He has given 33 possible sites. As far as we can see at present really speaking even Mandalay has no real advantage over Rangoon, leaving alone the other sites.

Mr. Robertson.—No.

President.—If you are selecting the other areas where you are going to plant, even then Mandalay will have no advantage at all. As a matter of fact it is at a disadvantage.

Mr. Robertson.—Except if we were to plant large supplies, we should have to rope in Upper Burma as well. Even then the planting would be done, I think, rather with reference to extraction by rail than with reference to extraction by river.

President.—That is always more reliable as regards the supplies.

Mr. Robertson.—It is reasonably certain.

President.—So that as far as Burma is concerned it does seem Rangoon is the most suitable locality.

Mr. Mathias.—Actually Mandalay is not very well situated for the supply of wood. There is no timber forest close to that.

President.—I am not able to understand why this match factory was started in Mandalay.

Mr. Robertson.—They had at that time along the river above Mandalay very considerable supplies of letpan. It comes up like a weed on the sand banks and on the islands in the Irrawaddy river, so they thought they had an assured supply of letpan.

President.—Now that letpan is being washed out except for veneer, it doesn't seem at all a suitable place.

Mr. Robertson.—No. I think for the present they should concentrate on Rangoon possibly Moulmein and some place in the south.

President.—As regards the total requirements of Burma, really speaking, taking the present figures, the Adamjee's factory and one other factory will probably supply the whole demand.

Mr. Robertson.—Of course I was looking at it entirely from the possibility of its being cheaper to take the stuff out to other sites and manufacture splints there or rather veneers.

President.—That we have also to consider. It doesn't seem that there would be much economy in it.

Mr. Robertson.—Under present conditions Rangoon is the only possibility and later on when we know more about things, there may be some place in Tenasserim.

President.—As far as one can see anyhow Rangoon is as good a centre as any and better than most others.

Mr. Robertson.—Yes. The best thing is to concentrate on Rangoon.

Foreign capital.

President.—In answer to B (6) you say that foreign capitalists are interested in two factories, the Kamaung factory and the Rangoon Match Works.

Mr. Watson.—I had that information from Mr. Moodie. That is all I know about it.

President.—It did look as if that might be so. We put that question to Mr. Bawaney and he denied it.

Mr. Watson.—That was a result of Mr. Moodie's enquiry. But I do know that the enquiries for supplies were made by the Swedish agents.

Method of selling timber from Government forests.

President.—As regards the arrangement for the sale of trees from Government forests to match factories, there are two things. The first is that you must get a certainty that you would be able to dispose of your timber and the second is that there must be a reasonable certainty in the minds of the manufacturer that the supply would be available.

Mr. Watson.—In calling for tenders for timber from reserve forest we usually mark up the first coupe and say we either call for tenders for so many marked trees in which case it would be simply a yearly extraction of a coupe or we have tenders for working definite areas for five or ten years.

President.—Would it be possible for Government to fix a flat rate of royalty at so much per ton without inviting tenders?

Mr. Watson.—No, because the tenders are fixed according to the competition.

President.—Supposing you went in for plantation on a sufficiently large scale.

Mr. Watson.—If we had a plantation we would put up each coupe to auction.

President.—The question arises in this way. Supposing we came to the conclusion that there was this Trust operating and assuming we came to the conclusion that it was not to the interests of the country to allow a Trust to operate in that way: of course if the Government say that this is a Trust and shall not exist, it is well and good but supposing that is not found possible then the Government must devise some method by which it can prevent the Trust from getting its principal raw material.

Mr. Watson.—The Government don't say that they would accept the highest tender.

President.—If you make the timber available to any trader, by tender, then you may get a tender from a man who is not a manufacturer of matches and if he gets it, he may give it to the Trust afterwards.

Mr. Watson.—I don't think we would allow that.

President.—My point is this. You are the principal supplier of the raw material. The idea is that the raw material should not pass into the hands of those companies which are not approved by Government. If you put up the timber for sale or to auction, one man may take it and sell it to those people not approved by Government. But if you say that only the person running a *bonâ fide* match business is entitled to this wood, you can keep out the other men. Would there be any difficulty in doing like that?

Mr. Watson.—The tender system was adopted in order that there should be no question of any favouritism in allotting forests. That has been the policy

of Government for the last 20 years. Further, if you are to limit the tenders to a group of five match factories, there is nothing to prevent those five people from forming a ring to keep down the price.

President.—Therefore I suggest that you should offer a flat rate.

Mr. Watson.—In that case Government would be accused of favouritism. It might be possible, but I should not advise anything like that being contemplated till the necessity arose.

President.—The necessity might arise in this way. Supposing it is found that it is not advisable that any foreign monopoly should operate in the country.

Mr. Watson.—We should have to devise some means of getting round it.

Mr. Mathias.—I suppose that it would be possible to avoid the implication of favouritism, if you had a fixed rate and three or four match factories applied for the same area, by drawing lots for them.

Mr. Watson.—It might be. But the usual thing would be to have a fixed rate and to either call for tenders for a lump sum for the right to work or to auction the right to work.

Mr. Mathias.—If you had a fixed rate and called for tenders and three people applied for the same area, it would be difficult.

Mr. Watson.—In that case we should put it up to auction.

Mr. Mathias.—But if it were decided to abolish the auction system, supposing that Government were to fix the rates at Rs. 12 or Rs. 15, and that the Indian match factories were allowed to extract timber at that rate, then and if two or three people applied for the same area, the only way would be to draw lots in order to avoid the accusation of favouritism.

Mr. Watson.—This would arise in the case of planted forests but in the case of natural forests it would be uneconomical for people to extract matchwood only.

Mr. Mathias.—I don't think that the question would arise so much in regard to forest areas as in regard to the planted areas.

Mr. Watson.—The problem won't arise for another 5 years.

Dr. Matthai.—In the case of Mahuya reserve, a case like that might arise.

Mr. Watson.—As regards Mahuya, I am not certain but I think that it provides for renewal after a year of negotiation.

Dr. Matthai.—Supposing you don't do that and you are putting up to auction or tender, in that case the same difficulty might arise.

Mr. Watson.—Yes.

Mr. Mathias.—As regards these concessions for matchwood areas, in some ways they are like mining leases or prospecting licenses. The man has to go into the forests and ascertain himself how many trees there are and it is suggested to us that a competitor who has not spent a penny on inspecting the forests may bid a few rupees more and the man who has done the prospecting may lose.

Mr. Watson.—That will happen always.

Mr. Mathias.—There is something to be said for their point of view.

Mr. Watson.—Of course there is. It happens in a thing like teak. We put up teak forests. We may have a firm taking elaborate trouble to get its tender figures right which may be ousted by a firm putting in a speculative tender.

Mr. Mathias.—As regards the prospecting license, so long as the prospecting license was in force, the licensee has the right to take up a particular area on payment of the fixed royalty. Cannot something on those lines be worked out?

Mr. Watson.—I don't think that it would work.

Mr. Mathias.—I am speaking of match wood generally.

Mr. Watson.—I don't believe that it would pay to work them by themselves.

Dr. Matthai.—Adamjee's work the reserves themselves.

Mr. Watson.—Mr. Adamjee Hajee Dawood is an exceptional man.

President.—The only thing would be to do departmental extraction.

Mr. Watson.—We could not touch it. We would have to have a special staff, and I should not advise as a financial undertaking.

Mr. Mathias.—For the small factories, the most economical method of providing themselves is to buy from petty contractors.

Mr. Watson.—I don't see any other alternative.

Mr. Mathias.—It won't be a good proposition for them to take one of the forests in Insein and work like Adamjee's.

Mr. Watson.—I don't think that they have got either the capital or the organisation.

President.—Assuming that you undertook this plantation you would call for tenders in the ordinary way or auction the coupe?

Mr. Watson.—Yes.

Dr. Matthai.—Would not a system of rationing work according to the output of factories?

Mr. Robertson.—It will work all right so long as there is a margin of supplies. The moment you get short of supplies, there will be a frightful outcry that this or that man has not got enough to keep his factory going. We had that in the Munitions timber. We were giving out areas according to the output of the mills and there was a most fearful amount of outcry.

Dr. Matthai.—Because the situation of the plantations would differ. Some of them are easier to work.

Mr. Robertson.—Yes.

President.—Supposing the Trust is operating it might put up a man to take the whole quantity.

Mr. Watson.—Yes.

President.—If the Trust operates it would be the first thing that it would do.

Mr. Watson.—Yes.

Mr. Robertson.—You can generally get round that by putting a minimum outturn or minimum royalty.

Mr. Mathias.—If a manœuvre of that sort were attempted, Mr. Adamjee and others would not keep silent.

Mr. Robertson.—Not for a moment.

Mr. Mathias.—It would be quickly brought to your notice.

Mr. Watson.—Yes. If we call for tenders for match wood we would favour those people who are manufacturing matches.

President.—Would you provide for that in your lease?

Mr. Watson.—In sending up the tenders to Government for acceptance, we would draw their attention to those who are recognised manufacturers of matches as distinct from those who are not.

President.—There are great practical difficulties. Supposing you undertake plantation and the wood is good, to-day it has a good market in other parts of the world.

Mr. Watson.—Yes.

President.—It may be that you may go on planting and yet all the wood may be exported.

Mr. Watson.—Yes. I very much doubt whether there would be room for many manufacturers.

President.—What do you mean?

Mr. Watson.—Supposing a big show came in, all the smaller people—machinery, organisation, etc.—it might buy straightaway.

President.—That is one of the problems before us in this particular industry. Here is a big organisation which has established itself all over the world. It may be that this country may not like it and may like to provide against it. In such a case how would the Forest Department be able to help the Government? That is why I am asking you the question how to prevent the monopoly?

Mr. Watson.—In the case of tenders put up for teak wood we turn down very often the highest tender on the ground that the man is unsuitable and that we don't consider that he has got the financial backing or the experience of working. We by no means accept the highest tender.

President.—Would it be possible for Government to do this that the Department would have this plantation; that it would work it through an agency and sell the extracted lot.

Mr. Robertson.—It will make very little difference.

President.—It will in this way. The final selling authority would be Government. Instead of claiming a royalty of Rs. 10, supposing you get a man to extract the log and pay him Rs. 20 you sell at Rs. 30 to the manufacturers of matches.

Mr. Robertson.—It comes to very much the same thing. We will be selling cut logs to the manufacturers instead of on the stump.

President.—The quantities available in Burma are far in excess of the requirements of the match factories here, so that the Indian manufacturer might want to buy his timber from Burma if they knew that you had this timber for sale at a particular price?

Mr. Robertson.—The same thing is done in the case of teak trees. Indian buyers come in here and tender for forests for export to India, and not for local use here. It is true they generally work through local firms but there are certain parties who have definitely tendered for teak forests for their own industry in India.

President.—You stocked these teak logs and sold them by public auction in Rangoon. I say the same thing about this log except that in place of the auction you may have a flat or any other rate at which purchasers in India might secure its supply.

Mr. Watson.—We would not take the risk of extracting or felling.

President.—You may tell him that you would extract them only if he bought them.

Mr. Robertson.—The actual cutting and extraction he can always secure through his agency. The point really is where the control has to be, is it to be at the point where the tree is on the stump or is it to be where it is made over to the purchaser. It does not really make very much difference whether Government fells the tree and after that hands it over to the purchaser or they hand over the tree on the stump.

President.—If it turned out to be a good proposition then there might be a good market outside Burma and India.

Mr. Robertson.—It is an indirect form of protection really to the indigenous industry.

President.—Of course it may be possible to have more factories in Burma to supply matches in India.

Mr. Robertson.—In the end that would be the most economical way of developing the match industry because it can never pay to take all your timber over to India and pay heavy freights on it. You can rather make matches out here, and supply them to India.

President.—May I put it this way: would the Government of Burma, so far as the forests are concerned, agree to a flat rate or a more or less sliding scale or whatever it is, the idea being that after, for instance, say, five factories have been established in the country, they might mind that for the forest department it was more remunerative, to sell the logs outside India than sell within the country?

Mr. Watson.—There is the danger of favouritism if the department do away with the system of tender. As I said I find it very difficult for a commercial

department agreeing to sell the stuff at a lower price than its commercial value. We could fix up the price by negotiation, that might be possible, but there again, as I said, I find it very hard under modern conditions to avoid the danger of favouritism if we do away with the tender system.

President.—You can have the tender system amongst the local purchasers but they might export it to the detriment of the indigenous industry.

Mr. Watson.—It is for Government to say that it is not for export and thus prevent its export.

President.—If this Trust has made up its mind to do it, it will say “we will take away all the timbers from this place.” After all it is a very small quantity, 100,000 tons is nothing for them. For that reason it might be quite necessary to see that that did not happen.

Mr. Watson.—That is a matter of larger national policy and I think that is outside the scope of the forest department.

Mr. Mathias.—If the Local Government accept a policy of that kind will the forest department have any difficulty in giving effect to it?

Mr. Robertson.—If they say only certain people will get it, we will arrange to give it to them.

President.—You exported a lot of timber during the war. Were there any restrictions?

Mr. Watson.—What happened in fact was that we put forward a proposition as to the reasonable rates of export and there was no opposition from the mills because they had no market.

President.—Can you get wood from unclassified areas?

Mr. Watson.—I don't think it would be worth trying. In the unclassified forests people have a right to extract timber for domestic use and it is practically impossible to enforce the restrictions there.

President.—As regards reserved forests outside the plantations you can put these restrictions?

Mr. Watson.—We can. The only thing is that it will have to be so managed as to give a sustained yield.

President.—Have you given any exclusive rights to any people for the extraction of their timber?

Mr. Watson.—Yes, Adamjees are the only one, and then there was the other one but Adamjees' were the higher tender and they got it. So far there are no other.

Plantation by the Forest Department.

President.—As regards the general question, so far as the forest department are concerned, they would be prepared to experiment and to undertake plantation?

Mr. Watson.—Yes. As a matter of fact we are thinking of starting and we do experiment to a certain extent but we have not got on to it systematically because we have had no wholtime silviculturist for the last three years.

President.—Will you kindly think over this question and tell us what the difficulties are as regards expediting the question of plantation?

Mr. Watson.—The only difficulty is that we do not yet know how to grow them.

President.—Is there any question of expenditure?

Mr. Watson.—No. We can supply the funds if Government declares such a policy.

President.—As regards declaration of policy by Government in what form should they declare?

Mr. Watson.—They would merely say they would like the forest department to enquire into the possibility of planting match wood and the necessity of reserving extra areas for the purpose of planting match wood. If we had that order we would immediately divert a certain amount of acreage of our areas

for experiment and we would put a man on special duty to examine the areas along the Irrawaddy, and the sooner the better because it is possible that with the creation of the new services we will have no other man of experience and training because as soon as the new policy is adopted there will be no more recruitment.

President.—How many men would you require to carry out that project?

Mr. Watson.—I should require only one man. We can do with our existing staff but the only thing is that our staff is rather in a precarious position. We are 25 men short in the old Indian Forest Service; recruitment has closed down and they have not yet decided on the services to replace it or how it is to be recruited. We have not been in a position to start recruitment for the new service yet and we do not even know whether we shall get men.

Enumeration.

President.—As regards this enumeration would you be able to give us some information as regards the other areas?

Mr. Watson.—We can only give you figures as regards enumeration each year of the areas that are taken up by the working plan parties.

President.—How many areas are taken up in a year?

Mr. Watson.—We have four parties; they work at the rate of 150 square miles per year and a forest division may take three or four years.

President.—Do they complete one division and then come to the other?

Mr. Watson.—Yes. They value the forest, enumerate a particular species in one coupe and of one marketable species and then form an estimate of the marketable expenditure on the group.

President.—In the next year which are the divisions they are taking up and what group of species?

Mr. Watson.—Sawbga in Pyinmana, North Toungoo and Henzada divisions.

President.—The two later divisions are those with which we are concerned. Will the information be available this year?

Mr. Watson.—We can, of course, give you some information but if it is a three years' job the working plan will be published three years later and it will contain all the figures. But we can give you figures of the results of enumeration each year at the end of the examination of this group of species.

President.—We would like to have as much information on this point as we can and you send it to us as you get it.

Mr. Watson.—I will do so.

President.—Are you in touch with Dehra Dun on this point? We wrote to Dehra Dun on this subject.

Mr. Robertson.—We are in constant touch.

President.—We have asked them to give us any information they may have collected and we wanted to know whether they have collected any information recently in Burma.

Mr. Robertson.—No, not in Burma. I don't think we have had the match question raised for a number of years. When I was in Dehra Dun the question used to come up but the rates at which the factories expected to get timber were so hopelessly impossible that we could do nothing. I think they wanted the timber at one anna per cubic foot!

Dr. Matthai.—How long ago was that?

Mr. Robertson.—In 1921-22. Last time I was down in Calcutta in 1922 some of the Directors of Industries were saying that the rate at which the manufacturers expected to get timber for matchwood was an anna a cubic feet. That was impossible on the face of it. Various enquiries came up but none of them were really serious enquiries.

President.—People attach too much importance to the royalties which are nothing when compared to the costs?

Mr. Robertson.—No.

NOTES FOR TARIFF BOARD ON MATCHWOOD ENQUIRY.

BRIEF NOTE ON WORKING PLANS BY MR. H. R. BLANFORD, CONSERVATOR OF FORESTS, WORKING PLANS CIRCLE.

Definition.

A working plan lays down the management of a forest for a number of years. In Burma, working plans are now usually made for a whole division and lay down the full organization of the division for all works for a period of 10 years.

Working plans may or may not be based on data collected in field work. Those not based on field work are called "paper plans" and are framed to organize the work in less important forests or as a makeshift until field work can be undertaken.

Preliminary.

Before a working plan based on field work can be prepared a survey on a fairly large scale is necessary. The ordinary topo 1" survey maps are not sufficiently detailed for accuracy. We use 4" scale by preference but sometimes have to use 2" scale.

The survey is carried out by the Forest Survey party attached to the Survey of India, Burma Circle.

Field work for working plans.

The field work for working plans consists first of all in dividing the forest into compartments as the unit of management. Compartments vary in size according to the intensity of management but the average size is about one square mile.

Having laid out the compartment the Working Plans Officer has then to prepare an estimate of stock. To count out the stock on the whole area would take too much time except where the system of management is very intensive. About 25 per cent. is actually counted out and an estimate of the stock for the whole compartment is based on this. Care has to be taken to select the 25 per cent. of the area so that it is representative of the stock in the compartment, as types of forests and therefore numbers and kinds of trees vary considerably from place to place. The area selected for counting is called the sample plot. There are usually three sample plots in each compartment. Before selecting the sample plots, the Working Plans Officer has to examine the area and prepare a stockmap showing the distribution of the various types of forest and sample plots are selected as representative of the area. A sample plot party then proceeds to the plot and measures each tree. The trees are recorded by 4" diameter classes. Although every tree is measured, different kinds are so numerous that it is not usual to record every different kind in each plot. Usually the more important species only are enumerated separately, the rest being classed as "Others". The more important species vary considerably. In forest which is inaccessible to extraction of any timber except teak or other floatable timber, only teak and one or two more of the most valuable timbers are counted. In areas accessible for cart traffic and within an economic distance of a large river or railway a number of the more useful and marketable timbers are counted.

Besides this, however, in one plot in five, all species that are likely to be of any value at all and can be recognised, are counted separately. The object of this is to give a general idea of the quantity of any kind of tree

for which a demand may arise. As only one plot in five is counted for all species and as ordinary plots are counted out over 25 per cent. of the forest, it follows that the "all species" plots only cover 5 per cent. of the area and any estimate based on these counts is not very reliable.

The system of enumeration described above has only been in force for a few years. Previously still fewer species were counted separately and no attempt was made to obtain details for the less important kinds.

Matchwoods have up to now been in little demand and it is only during the last two seasons that any attempt has been made to enumerate them separately. Even then they have only been enumerated separately in every fifth plot, except in Insein division.

The field work also includes the collection of any data of rate of growth of the various species as may be possible. This is only possible for trees which show annual rings in the wood. All trees put on a ring of wood every year but it is only a few on a cross section of which the annual rings are clearly distinguishable. Teak shows clear annual rings and therefore we know a good deal about its rate of growth but few matchwoods show any annual rings, and the only means of determining the rate of growth is by periodical measurement of growing trees—a very slow process.

Working up data.

On completion of the field work, the Working Plans Officer has to estimate the total stock in each compartment from the results of enumeration in the sample plots. He then works out the total stock of the more valuable species in the forest and calculates the yield. The essence of sound forest management is the *sustained yield*. That is to say the yield must be fixed on conservative lines with due regard to sustaining or even increasing the yield in the future.

The yield is fixed at an annual amount that can be taken out of the forest over a period of years and leave the forest at the end of the period with the same total stocking or preferably an increased stock. Theoretically, the yield should equal the increment of the forest. Each tree in a forest is increasing in volume every year. If we had full data for the volume of increase in trees of different sizes we would fix that amount as the yield. This requires, however, a very accurate knowledge of the rate of growth and in the present state of our statistical knowledge is not possible.

In practice therefore the yield is calculated from the estimate of the stock. The following purely imaginary example may perhaps make it clear.

Let us assume that an area covering 100 square miles of forest is known to contain 200 tons of matchwoods over the exploitable girth per square mile and that the stock below the exploitable girth is ample to replace that stock in course of time. We then work out the rate of growth and calculate the period it will take for trees at present below the exploitable girth to grow up and replace the present stock of timber over the exploitable girth. Let us assume that this is found to be 20 years. We then know that it will be safe to work over the whole forest in 20 years and remove all timber over the exploitable girth. The total exploitable tonnage now is 100×200 tons = 20,000 tons and the yield can then be fixed at 20,000 divided by 20, or 1,000 tons per annum. Actually the yield could be fixed at slightly over this amount but the above example shows one simple method of determining the yield and it is unnecessary to go into more detail.

Having fixed the yield for a number of years the areas to be worked over annually are laid down, though as a matter of convenience this is usually done in consultation with the extraction agency.

The yield is usually fixed for a period of 30 years which is the usual period that the whole forest is worked over by selection for teak.

Besides fixing the yield and laying down the areas to be felled in, the working plan decides the silvicultural system under which the forest is to be managed. In Burma, we have two main systems:—

The Selection system, in which trees over the exploitable girth are selected for felling and the whole forest is worked over once in the period considered necessary for the trees cut out by selection to be replaced by smaller trees growing up over the exploitable girth.

The Clearfelling system, in which successive blocks of forest are clearfelled and planted up.

The former results in a forest of trees of different ages—uneven aged forest.

The latter gives a series of even aged crops and is so arranged that an equal area becomes ready to cut over annually.

The Selection system is peculiarly suitable to a forest in which only one or two of the many kinds of trees are marketable. It is the system that must for many years be used for matchwoods and the Clearfelling system can only be introduced for matchwoods, if and when, we get plantations of these species.

Working Circles.

In each division there are many classes of forest and probably there are different objects of management in each class. The same system of management cannot usually be laid down for the whole division. The division is therefore divided into different working circles which frequently overlap. A working circle comprises an area which is worked under one system of management with a definite object in view. For instance, a Burma Division, is usually divided into at least the following three working circles, while others may be added in special cases.

I. *Teak Selection working circle*.—This embraces the majority of the teak forests and may overlap other working circles. The working plan will prescribe the working of the forest as far as teak is concerned for the whole working circle.

II. *Trade working circle*.—This will include all areas accessible to trade extraction of timbers other than teak, after allotting areas necessary for the village, as apart from trade supply. The system of management is usually clearfelling, though, until plantation work can be organised on a large scale, it is usual to continue to work the greater portion by selection.

III. *Village Supply working circle*.—Areas required for the supply of the local population are allotted to this working circle which is managed entirely with that supply in view. Politically this working circle is naturally very important. Commercially and financially it is unimportant.

Matchwoods would usually be worked under the Trade working circle, in conjunction with other marketable timbers but in cases where only matchwoods are exploitable a special matchwood working circle might be formed, as has been done in Insein under the new working plan.

NOTE.—A working circle has nothing to do with a territorial circle such as the Hlaing Circle, which is purely an administrative unit.

Accessibility.

As the system of management depends so much on accessibility, a note on accessibility as applied to Burma forests may not be out of place. Accessibility depends almost entirely on the means of extraction. Teak after standing girdled for three years, will float. It is a very durable timber, not liable to rot or damage by white ants and can therefore lie in the forest or streams for a number of years without serious deterioration while in course of extraction. It can therefore be extracted from practically every forest in Burma, provided a stream which will float timber even at rare intervals after specially heavy rain is available. It is also our most valuable timber and can carry high costs of extraction before reaching a floating

stream and, even in exceptional cases, will pay to extract by tramways where difficulty or delay in floating justifies the expense. This is even in spite of the fact that it rarely comprises 10 per cent. of the stock in any particular forest and few forests can produce more than two or three tons of teak per acre. On the other hand few of the other marketable timbers will float. The tonnage of such timbers in relation to area is small (probably not more than 6 to 8 tons per acre) and their value is almost invariably considerably below that of teak. Practically the only possible method of extraction from the forests is by carting and their export is almost entirely dependent on railways or rivers sufficiently large to allow of floating attached to bamboos to buoy them up. It naturally follows that the area from which they can be extracted profitably is extremely limited, while in view of their comparatively low value and small tonnage per acre, there are few areas where mechanical transport such as railways, tramways, or even lorries on good metalled roads can be shown to be financially justifiable. It is estimated from average figures that the average volume of all trees of all sizes over 8" diameter per acre in Burma is 15 tons (750 cu.ft.). Out of this a considerable percentage probably 30 per cent. is too small to be of any utilizable value, while at least 50 per cent. of the remainder is composed of timbers which have no market value and many of which are unlikely ever to have any appreciable value. The balance of just under 5.75 tons contains a certain amount of teak, on an average probably 1.5 tons per acre which will always be cheaper to float out, where good floating streams are available; as they usually are. The balance of 4½ tons per acre can hardly justify any great expenditure on capital charges for extraction considering the small tonnage over which such capital charges must be distributed.

Matchwoods are a special case because the majority of them are floatable but I do not believe that that will materially increase the limit of accessibility. Unlike teak they are far from durable and any delay in utilizing the timber after felling leads to their destruction by rot or white-ants. They cannot therefore lie about in the forest awaiting a favourable rise in a floating stream. In addition to this the method of manufacture demands green timber, undiscoloured by sapstain or incipient decay. The time that elapses between their felling and utilization must, therefore, be as short as possible and unless they can be put into water very quickly after felling they would not endure the usual period it takes to extract more durable timber such as *pyingado* from the forest to the mill. I believe therefore that rather than the limit of accessibility being increased by their capacity for floating, the ordinary limit of accessibility would be considerably less than that of hardwoods such as *pyingado*, apart from all questions of relative value of timber, except in exceptional cases where the matchwood timber can be conveyed direct by water to the factory at any time of the year.

Leasing of forests.

This is no part of the working plan. Forests are leased by Government and the only points in which working plans are concerned are to fix the limits of working and the areas in which work is to be carried out and to see that the work is carried out in accordance with prescriptions.

ESTIMATES OF STOCK AND YIELD OF MATCHWOODS.

Insein Division.

Estimates are based on a 25 per cent. enumeration for the greater part of the area carried out in season 1925-26. Full details for the different species in diameter classes have been given already. The following is a summary only.

Eastern felling series.—(Mahuya reserve and Paunglin reserve of which stock in 29 compartments was enumerated and in 71 compartments stock was estimated roughly on basis of estimates in enumerated portion.)

Exploitable girth fixed at 5' at breast height or 18" diameter. Species enumerated *Sawbya*, *gwe*, *ma-u*, *didu*, *letpan*.

Reserve.	Area.	Stock of match-woods 14 to 18" diameter and over.	Stock of match-woods 18" diameter and over.	Remarks.
1	2	3	4	5
Mahuya	Acres.			
Paunglin 29 Compartments enumerated.	47,776	18,695	14,848	
Paunglin 91 Compartments and Kalitaw reserve 9 Compartments.	19,400	6,159	7,781	
	53,320	10,000	9,000	Less accessible and not so well stocked. A rough estimate only.
Total	120,500	34,854	31,629	

Increment during the felling cycle of 15 years has to be reckoned. The usual calculation is that in the period of the felling cycle 80 per cent. of the class below grow up over the exploitable girth and that half of these will become exploitable during the felling cycle.

$$\text{Increment is } 34,854 \times \frac{80}{100} \times \frac{1}{2} = 13,840.$$

Total amount available during felling cycle = 45,469.

$$\text{Yield is } \frac{45,469}{15} = 3,031 \text{ or } 3,000 \text{ trees } 18" \text{ diameter or } 5' \text{ girth and over.}$$

$$\text{Stock of exploitable timber per acre allowing 1 ton of 50 cubic feet per tree } 5' 0" \text{ girth and over: } \frac{31,629}{120,500} = .26 \text{ tons per acre.}$$

$$\text{Annual yield per acre of forest } \frac{3,000}{120,500} = .025 \text{ tons per acre.}$$

Western Felling Series.—(N. Hlaing Yoma Plains, S. Hlaing Yoma Plains, Magayi and Thabyu reserves.)

Exploitable girth 5' 0" at breast height or 18" diameter.

Species enumerated as for Eastern felling series but including *thitpok* which is probably unsuitable.

Area—46,941 acres.

Stock of matchwoods 14" to 18" diameter—21,203.

Stock of matchwoods 18" diameter and over—11,186.

Half increment as above

$$21,203 \times \frac{80}{100} \times \frac{1}{2} = 8,480 \text{ trees.}$$

Total available during felling cycle.

Note.—In this case felling cycle has been fixed at 20 years to agree with felling cycle for other timbers as it would be inconvenient to have two different cycles for one area.

$$11,186 + 8,480 = 19,666.$$

$$\text{Yield} = \frac{19,666}{20} = 983 \text{ trees, say } 1,000 \text{ trees } 5' 0" \text{ girth or } 18" \text{ diameter and over.}$$

Stock of exploitable timber per acre allowing 1 ton of 50 cubic feet per tree 5' 0" girth and over.

$$\frac{11,188}{46,941} = .24 \text{ ton per acre.}$$

Annual yield per acre of forest—

$$\frac{1,000}{46,941} = .0213 \text{ ton per acre.}$$

Magwe Division.

Estimates are based on a few plots in which all species were counted and owing to the small area over which countings of these species were carried out the estimate cannot be depended on too much.

Only the following matchwood species were present to any extent and the previous estimates which includes *Binga* and *kuthan* should be omitted as these are no longer considered matchwood species:—

Didu, letpan, and gwe.

Average tonnage of trees 5' 0" in girth or 18" diameter and over per acre for all plots in division (allowing 1 tree=1 ton) is as follows:—

	Ton per acre.
<i>Didu and letpan</i> . . . . .	.464
<i>Gwe</i> . . . . .	.225
Total	.689

At the outside only 60 square miles can be considered accessible giving a total stock of 28,000 tons.

The annual yield would probably be about 2,600 tons.

Pyinmana Division.

Mynbyin reserve.—Estimates are based on about 5 per cent. enumeration and are not therefore very reliable. They will however serve as a good guide.

The following matchwood species were counted:—

Didu, letpan, gwe, ma-u.

Average tonnage of trees 5' 6" in girth or 18" diameter and over per acre is as follows:—

	Ton per acre.
<i>Didu, letpan</i> . . . . .	.219
<i>Gwe</i> . . . . .	.122
<i>Ma-u</i> . . . . .	.088
Total	.429

About 80,000 acres may be considered accessible so that total exploitable stock would be 34,320 tons. The annual yield would probably be about 3,400 tons.

Yonbin and Palwe reserves.—Estimates are based on about 5 per cent. and can only be considered a rough guide to stock.

The following species were counted:—

Yemane, didu, letpan, ma-u, gwe, lettok.

Average tonnage per acre of trees 5' 6" in girth or 18" diameter and over is as follows:—

	Palwe.	Yonbin.
<i>Didu, letpan</i>	·22	·24
<i>Yemane</i>	·06	·015
<i>Ma-u</i>	·11	·06
<i>Gwe</i>	·1	·1
<i>Lettok</i>	—	·005
	·49	·42

About 32,000 acres in Palwe and 26,000 acres in Yonbin may be considered accessible now so the total exploitable stock would be:—

	Tons.
Palwe	15,680
Yonbin	10,920

Annual yield would probably be about—

Palwe	1,500
Yonbin	1,000

Kaing and Yanaungmyin reserves.—Estimates are based on about 20 per cent. of the stock and are therefore fairly reliable. The whole area of the two reserves may be considered accessible.

Same species counted as in Palwe and Yonbin.

Average tonnage per acre of trees 5' 0" girth or 18" in diameter and over is as follows:—

	Kaing.	Yanaungmyin.
<i>Didu, letpan</i>	·12	·19
<i>Yemane</i>	·13	·01
<i>Ma-u</i>	·55	·01
<i>Gwe</i>	·17	·065
<i>Lettok</i>	—	·005
	·97	·23

Areas, stock and probable yield are:—

	Area. acres.	Total stock. tons.	Annual yield tons.
Kaing	13,341	13,000	1,300
Yanaungmyin	13,078	3,660	·60

Total probable stock and yield in accessible areas in Pyinmana and Magwe divisions are as follows:—

Division and Reserve.	Tonnage of trees 5' 0" girth & over.	Probable annual yield.
<i>Pyinmana</i> —		
Minbyin	34,320	3,400
Palwe	15,680	1,500
Yonbin	10,920	1,000
Kaing	13,000	1,300
Yanaungmyin	3,660	360
	<hr/>	<hr/>
	77,580	7,560
<i>Magwe</i>	26,000	2,600
	<hr/>	<hr/>
GRAND TOTAL	103,580	10,160
	<hr/>	<hr/>

DATA FOR RATE OF GROWTH OF MATCHWOOD SPECIES AVAILABLE.

(Few data have been collected.)

Mandalay.

Letpan—

A few trees planted by the Irrawaddy Match Factory (Darwood) on Irrawaddy bank.

At 11 years old they averaged 30' high and 24" girth.

Henzada Division.—Alluvial bank in especially favoured area. Other plantations nearby not so favoured had not grown anything like half as big.

At 7 years old average 57' high and 36" girth. This is very exceptional growth.

Didu—

Prome Division.—A few trees in a plantation in dry forest with *myinwa* bamboos.

At 17 years old girth 1' 5", height 40'.

Ma-u—(*Anthocephalus Cadamba*)—

Insein Division.—Average annual girth increment of 14 trees over 5 years in a sample plot was 1' 14". Assuming this to be mean annual increment it would take about 53 years to grow to 5' 0" girth but growth at any rate earlier is much faster than this.

Tharrawaddy Division.—In a plantation 8 years old average girth 29", height 48'.

Yemane.—

Myitkyna Division.—7 years old plantation average 51' high, 20.5' girth.

In a very favourable locality.

Tharrawaddy.—5 years old plantation average 31' high, 11" girth; 36' high, 10.4" girth.

NOTE.—Few of the figures given above show an average annual increment in early years of much over 3" per annum and later it is certain that girth increment falls off considerably. In order to attain a girth of 5' 0" in 30 years an average mean annual increment of 2" would be necessary. In favourable localities it is probable that *letpan*, *ma-u* and *yemane* would attain this but it is by no means certain.

Distribution, frequency and characteristics of principal matchwood species in Burma.

Sawbya (Sterculia campanulata).—This must not be confused with *Tetrameles nudi flora* which is a large and rather common tree in moist forests with a light whitish non-durable timber which is commonly called *Sawbya* in many parts of Lower Burma. This is believed to be useless for matches.

Sawbya (Sterculia) is not a common tree except in Insein Division and possibly in neighbouring forests in South Pegu division and in Bassein. As far as I know it is not found in Upper Burma at all. The only other place it may be found in is Tenasserim. It has never been planted and nothing is known of its rate of growth or silvicultural requirements.

Bonneza.—This is found generally throughout Burma but can nowhere be called a common tree. Its rate of growth is probably fast. It has never been planted and it is very doubtful if it would form a pure plantation successfully as it has a very light spreading crown and is adapted for growing in mixed crops.

Didu and Letpan.—*Didu* replaces *letpan* on all higher ground. It is fairly common throughout Burma in the drier type of deciduous forest with bamboos. It grows to a considerable size but is probably not as fast growing as *letpan*. It would probably not be suitable for growing in a pure crop as in the drier localities it frequents, its light, spreading crown would fail to give protection to the soil. *Letpan* is found essentially on newly formed river banks. It is never found on hilly ground and is one of the first species to appear on newly formed sandbanks in areas of good rainfall. Pure, and often evenaged, groups may be seen all along the main Irrawaddy especially round about Katha and Shwegu. Plantations have been made and in very favourable localities have shown astonishing growth but as it grows at its best on banks that are inundated at high rises of the river, there is always a danger of the sand on which it grows best being scoured away round the young plants, more especially on an area that has to be cleared of all grass and weeded until the *letpan* can get away above the grass. Nevertheless I am convinced that the best prospects of planting matchwoods on a large scale lie in taking up riverine areas for this purpose. *Letpan* is quite capable of growing pure, and is usually found pure on newly formed sandbanks with an undergrowth of grass.

Gwe.—A common tree all over Burma, but never found in great quantities. It has never been planted and little is known about its rate of growth.

Ma-u.—A common tree all over Burma and is one of the commonest species that occur in the regrowth after clearfelling on *taungya* cultivation. It is looked upon as a weed in plantations of valuable species as it so often comes in very thickly and, as its growth is very fast, it interferes with the growth of the plantation and has to be cut out. It should be very easy to plant but is not well adapted to growing pure over large areas as it has a light spreading crown and would afford little soil protection. Its place in nature is as an early constituent of regrowth on newly cleared areas and it gives way later before the growth of more tolerant species.

Taungmeok or Segu (Alstonia scholaris).—A comparatively rare tree which can hardly affect the outturn of matchwoods appreciably. No experience of its growth or planting requirements.

Setkadon.—Never a very common tree; it is usually found in evergreen forests along the banks of streams or in open places near water. The only place I know of it in any quantity is along the Irrawaddy above Moda. Although it occurs in Lower Burma I should say it is more frequent in Upper Burma. It should not be difficult to plant, as it has a fairly heavy crown and often occurs in pure groups in nature. Should make a good plantation in suitable moist localities.

Ycmane.—Although a common tree throughout Burma it is nowhere plentiful and is in great demand for planking. Plantations have been made in many parts of Burma with considerable success. It is liable to damage by insect attack and it would be dangerous to plant large stretches of it pure.

**Evidence of Messrs. H. R. BLANFORD, Conservator of
Forests, Working Plans Circle, and C. H. PHILIPP,
Conservator of Forests, Central Circle, recorded
at Rangoon on Monday the 28th March 1927.**

Introductory.

President.—Mr. Blanford, you are Conservator of Forests, Working Plans Circle?

Mr. Blanford.—Yes.

President.—Mr. Philipp, you are Conservator of Forests, Central Circle?

Mr. Philipp.—Yes.

President.—I don't quite understand what this office exactly means.

Mr. Blanford.—First of all we have to enumerate or get some estimate of the stock and lay down future work for a period of years.

President.—That is to say you are the officer whose duty it is to find out the available supply?

Mr. Blanford.—That is part of the duty which I have to do.

President.—With reference to the notes you have sent in on working plans and on the species suitable for match making are the trees enumerated subject to any epidemics?

Mr. Blanford.—Very easily. One never knows until it actually comes.

Mr. Philipp.—There is that risk in every plantation.

President.—Do you have any epidemics in teak plantation?

Mr. Philipp.—Yes.

President.—Have you had any epidemics in the case of *Letpan*?

Mr. Blanford.—No.

President.—In the case of *Maulettanshe*?

Mr. Blanford.—We have not got big areas.

President.—What about the cattle? Do they like these young trees?

Mr. Blanford.—That is not a serious danger.

President.—What are the risks to which a plantation is exposed besides the epidemic?

Mr. Blanford.—Fire is one.

President.—That is a risk that is attached to all forests.

Mr. Blanford.—Yes.

President.—Is there any special risk attached to a matchwood plantation?

Mr. Blanford.—The greatest risk is the impoverishment of the soil. Most of the matchwoods do not protect the soil.

President.—What do you mean?

Mr. Blanford.—One of the essential parts of plantation is soil protection and even teak does not protect the soil sufficiently. We are now finding, in order to get good soil protection, that we have to under plant teak.

President.—What do you mean by "under planting"?

Mr. Blanford.—*Letpan* by itself gives a very light shade to the soil. The soil is apt to be very badly impoverished if there is no protection for it. It gets washed away.

President.—Would it be possible for you to do like this? You plant the first lot and as soon as it begins to afford some protection you can plant other trees, can't you?

Mr. Blanford.—We can do. Unless we get something which is going to give us some yield, it will be very expensive. That was the difficulty with teak. We have to find something that will afford the shade and at the same time give us a return. Otherwise the expense on the whole is unproductive.

President.—At present there is not at all any information on which any opinion can be based except to say that these trees do grow in the forests and that they might grow if planted.

Mr. Blanford.—Yes. Until recently there was no demand for match woods at all. All the plantation work has been confined entirely to species we know that we can sell, *viz.*, teak, *pyinkado*, etc. We know very little about match woods.

President.—If you have a demand now, you will begin to think.

Mr. Blanford.—Undoubtedly.

Mr. Mathias.—You are thinking of it already.

Mr. Blanford.—As a matter of fact, experiment has already been started. This year I want to start an experiment with *Letpan*.

President.—As regards your division Mr. Philipp, Tounogo and Pyinmana are in your circle?

Mr. Philipp.—Yes, as regards Pyinmana. Tounogo is in Sitting circle.

President.—If a splint factory was started there instead of bringing the wood in the log do you think that there would be very great difficulty in obtaining factory labour?

Mr. Philipp.—I do not think so. The population of Pyinmana is very heavy and I should say to-day we can obtain labour.

President.—So that from your point of view it would be better if the wood was available in the vicinity, to make the splints there.

Mr. Philipp.—I should say the factory should be, if possible, on the spot because there is always a lot of trouble about wagons to enable the logs to be sent down to Rangoon.

Mr. Mathias.—If you produced the splints in the forests, you would also have to split your expert supervision into two parts—you would have to have your expert in the forest to supervise the splint machine and you would have to have another expert in Rangoon to supervise the rest of the machines, the peeling machines and so on—and therefore don't you think that would run away with much of the savings that you effect?

Mr. Philipp.—Of course Pyinmana is only 10 hours by rail.

Mr. Mathias.—But still as far as I could understand from the examination of Mr. Bawaney this match machinery requires a good deal of expert supervision and unless you had an expert on the spot to look after the splints it is possible your work might suffer.

Mr. Philipp.—If the necessary transport can be provided then of course Rangoon is the place.

Mr. Blanford.—Why not have the whole thing at Pyinmana?

Mr. Mathias.—Then you have to pay the freight on the chemicals.

President.—Freight on chemicals will be small.

Mr. Blanford.—There is always difficulty about getting trucks.

Mr. Mathias.—But then again you will have to transport your matches to the ports; there are the handling charges at the ports and so on. I think they send a lot of matches to India.

President.—What is understood in forest language by the term conversion, when we speak of the average timber?

Mr. Blanford.—Converting round logs into some other form of timber: it means planks, scantlings and other kinds of sawn timber.

President.—It does not mean rounds?

Mr. Blanford.—No.

President.—Steel Bros. Limited get reduced rates of freight do they not? They say the freight to Calcutta is Rs. 27 in the log, to Madras Rs. 34-4-0 and to Bombay Rs. 45 and they add "It will also, no doubt, be of interest that above rates are double what is charged for converted timber" Does that mean when it was cut up into smaller sections?

Mr. Blanford.—Yes.

Extraction costs.

President.—Have you any information as to the rates of wages in the forests?

Mr. Philipp.—Timber work is generally piece work; the man gets so much per tree.

President.—What is the rate in this circle of yours for, say, felling?

Mr. Philipp.—Felling and logging Rs. 1-4-0 per ton. I have nothing else to add to the replies that I have given in my answers to the questionaire.

President.—Then the further labour involved would be one rupee a ton per mile?

Mr. Philipp.—That is for extraction.

Mr. Mathias.—You say Re. 1-4-0 per ton, do you weigh it?

Mr. Philipp.—No. It is by measurement. There is enormous difference in weight.

President.—What is the further expenditure to be incurred after felling and to take it to the river side or the railhead. In this forest you put it at about Rs. 5?

Mr. Philipp.—Rs. 5-12-0. That is the average for the Pyinmana division.

President.—That is done by buffaloes, I suppose?

Mr. Philipp.—Yes.

President.—I suppose buffaloes are available in sufficient numbers?

Mr. Philipp.—Yes.

President.—On top of that what expenditure do you incur up to the rail-head?

Mr. Philipp.—Loading on the railway.

President.—How much would you estimate that?

Mr. Blanford.—I suppose it is included in the freight.

President.—I take it the loading would be done by the railway?

Mr. Blanford.—To a certain extent.

President.—You take it to the goods shed and the railways do the loading, so that you have, simply got to carry it to the railway station and then there is the railway freight.

Mr. Philipp.—Yes.

President.—At this end probably the factory would have its own unloading place at the back of the siding?

Mr. Philipp.—Yes.

President.—And the freight you have given is Rs. 14, is it not?

Mr. Philipp.—Yes.

President.—Is there a uniform rate for all classes of timber or does it vary?

Mr. Philipp.—No. The timber trade is rather different because they charge by the wagon ton not by the weight of the log, that is, not by the amount put on what they call a 10-ton truck; it may hold only 5 tons of timber and we have still to pay for the 10-ton truck.

Mr. Mathias.—You cannot say how many tons a wagon will hold?

Mr. Philipp.—A wagon will hold about half as a rule.

Mr. Mathias.—When you say freight to Rangoon is so much.....

Mr. Philipp.—That is allowed for. The freight from Pyinmana for a ton of timber for delivery to Rangoon excluding royalty and excluding any profit is about Rs. 26. That is the mere cost of extraction and freight to which has to be added royalty and the contractors' profit.

President.—Contractors' profit you estimate at how much per ton?

Mr. Philipp.—25 per cent. on his capital; it would be about Rs. 5. At about Rs. 30 to Rs. 35 you can get soft wood delivered including royalty and profit.

President.—Do you think if the demand for this class of wood is increased, the cost of extraction would go up to any large extent?

Mr. Blanford.—It would probably go down. You have got contractors working in certain areas which are more or less scattered and they would bring the soft wood along with the hard wood and their costs will therefore go down.

President.—Has there been in the last 10 years much increase in the cost of extraction?

Mr. Philipp.—I should not think so.

Mr. Blanford.—I think there was, because the cost of daily labour has gone up very considerably.

President.—I should naturally expect that it should go up with the cost of living.

Mr. Blanford.—Day labour was 8 annas, now it is near a rupee.

President.—Is that Burmese labour?

Mr. Blanford.—Yes.

President.—Do you have much Indian labour in this forest?

Mr. Philipp.—Practically none.

President.—We were told by Steel Brothers that for factory labour they would have to employ Indians.

Mr. Blanford.—I should think so, to a certain extent.

President.—In this factory that the Swedish people had in Mandalay did they have to employ Indian labour?

Mr. Blanford.—I never saw it worked but I know that the packing and all that sort of thing were done by Burmese women.

President.—But I don't think there would be any difficulty in getting sufficient Indian labour for the factory?

Mr. Blanford.—I should not think so.

**Evidence of Messrs. A. H. M. BARRINGTON, Conservator of Forests,
Hlaing Circle, A. W. MOODIE, Deputy Conservator of Forests,
Depot and Agency Division, and D. J. ATKINSON,
Divisional Forest Officer, Insein Division,
recorded at Rangoon on Tuesday,
the 29th March, 1927.**

Introductory.

President.—You are the Conservator of Forests, Hlaing Circle, Mr. Barrington?

Mr. Barrington.—Yes.

President.—Mr. Moodie you are Deputy Conservator, Depôt and Agency Division?

Mr. Moodie.—Yes.

President.—That is to say, you are concerned with the commercial aspect of the department, I suppose?

Mr. Moodie.—I am concerned with the selling of teak, supplying anybody wanting anything from the upcountry forest divisions and that sort of thing.

President.—Mr. Barrington, how long have you been in charge of the Hlaing circle?

Mr. Barrington.—Since July 1926.

Adamjee Hajee Dawood's reserve.

President.—Are you personally acquainted with the reserves that Messrs. Adamjee Hajee Dawood and Company have got?

Mr. Barrington.—No, Messrs. Atkinson and Scott know more about them.

President.—Have they taken a lease of these forests?

Mr. Barrington.—Yes.

President.—What is the area of that reserve?

Mr. Barrington.—127,000 acres.

President.—Has that been enumerated?

Mr. Barrington.—No, not in full. The total area of the Mahuya reserve is 47,776 acres and the total stock 18" and over is 14,848 trees each equal to 1 ton so that the tonnage per acre is 0.31 ton.

Dr. Matthai.—You mean the annual yield?

Mr. Barrington.—Yes.

President.—How much would 127,000 acres yield per year?

Mr. Barrington.—The calculation is that the Mahuya Paunglin yields 3,000 tons a year; Akkan, etc., has the same yield, and the total for the whole of the Insein Division is about 7,000 tons a year.

Dr. Matthai.—This new lease is also for fifteen years?

Mr. Barrington.—Yes.

Dr. Matthai.—That is the whole production for the Insein division.

Mr. Barrington.—The two leases roughly average 6,000 and the odd 1,000 is more or less reserved for the use of petty dealers.

Dr. Matthai.—So that Adamjee's concessions amount to about 6,000 tons a year.

President.—How many divisions are there in the Circle?

Mr. Barrington.—Five.

President.—What about the other areas?

Mr. Barrington.—North of Adamjee's concession is Tharrawaddy and Zigon which is further from the railway and so there has been so far no demand from that reserve.

President.—Tharrawaddy is not very far; how far would the forest be from the railwayhead?

Mr. Barrington.—Within 10 miles.

President.—So that Tharrawaddy division would not be too expensive?

Mr. Barrington.—No. That is largely a question of railing to Rangoon. They can of course float but they nearly always rail.

President.—Are there floating facilities in the Tharrawaddy division?

Mr. Barrington.—Yes. But if they want to get the soft wood down to Rangoon fresh they would have to come out within a certain period. It would be convenient to take them out during the monsoon. In the case of teak even if it takes two years to arrive it does not matter.

President.—In that case how far will they have to carry to the water head from the felling site?

Mr. Barrington.—About three miles to the floating stream.

President.—Have you any reason to suppose that the Tharrawaddy forests may not contain the same quantities of matchwood?

Mr. Barrington.—I think there would be a falling off in Tharrawaddy. There are enormous number of teak plantations and the forests are being heavily worked in improvement fellings with the result that a lot of matchwood is cut out. The forests are being so heavily worked for all timbers that probably matchwood will be almost eliminated from the accessible compartments.

President.—Mr. Moodie, your department enumerates the forests, does it not?

Mr. Moodie.—The working plan party enumerates certain species. Unless there is a demand for a certain species we do not enumerate them.

Dr. Matthai.—I suppose in your division you deal generally in hard woods?

Mr. Moodie.—The Depôt and Agency division is responsible for the sales of teak only: the utilization conservator arranges sales of hard woods.

Quantity of match timbers.

President.—We want a rough estimate of the quantity available. One of the points we have to consider is what natural supplies you have, say for the next 20 years or so. We want to know whether the industry has enough supplies till plantation is undertaken.

Mr. Barrington.—It is a matter of guess-work. From here to Prome on the Irrawaddy, you could probably count on another 7,000 tons.

President.—That is one Circle.

Mr. Barrington.—Yes.

President.—And there are other circles about which we have got some information now.

Mr. Barrington.—Tenasserim division has considerably more.

Mr. Mathias.—The additional 7,000 tons, is that a conservative estimate?

Mr. Barrington.—That is all accessible to Rangoon.

President.—The best thing is to assume the cost at Rs. 30 a ton including the profit of the contractor and everything except royalty. That is the order of figures on which we might work.

Mr. Moodie.—Yes. Rs. 30 per ton is about what match woods costs delivered—Rangoon.

President.—Rs. 30 is not an economic limit.

Mr. Moodie.—No.

President.—If you can show that that is about the cost including everything except royalty, even on to-day's cost of manufacture which must be relatively higher compared to future costs it is not a bad proposition for the industry.

Mr. Barrington.—We have started research work on planting.

President.—That is a different aspect altogether. We have got to satisfy ourselves if we are to make any proposals for the protection of the industry that there are sufficient woods available in reasonable quantities to justify the protection of the industry. Then of course the next thing would be to consider the prospects of matchwood planting, so that if the forest authorities have said 20 or 25 years to look forward to, then the position of the industry would be considered fairly safe.

Mr. Barrington.—I should not like to give an estimate. There is heavy rainfall both in Upper Burma and in the Delta.

President.—In the Tenasserim Division it is heavier still.

Mr. Barrington.—Timber from it never comes into the Rangoon market. If you could get steamers from and to Tavoy, it might serve the purpose.

President.—The point is that the total cost should be in the neighbourhood of that figure. To-day for instance in this Rs. 30 is included considerable amount of carting and railway freight and in any case from Moulmein or Tavoy by sea the freight would not be very much higher than by rail.

Mr. Barrington.—I should think Tavoy or Moulmein would be as quite as promising propositions as Rangoon.

President.—You consider that Moulmein or Tavoy would be suitable sites for manufacture.

Mr. Barrington.—Yes.

President.—And the wood would be available there.

Mr. Barrington.—I don't think there is the smallest doubt about that. I think Moulmein is the best centre for planting. That is in regard to the potential value rather than the actual value.

President.—In what way would the forest have an advantage over Paunglin or Mahuya reserve as regards plantation?

Mr. Barrington.—It is entirely a different type.

President.—Do these different classes of trees grow there?

Mr. Barrington.—Letpan is the commonest.

President.—The following six species are considered suitable:—

1. Sawbya.
2. Bonmeza.
3. Didu.
4. Gwo.
5. Letpan.
6. Maulettanshe.

We understood that Yamane is most suitable.

Mr. Barrington.—Yamane is most suitable.

President.—It is subject to disease.

Mr. Mathias.—It is also I understand a valuable tree for other purposes.

Mr. Barrington.—Yes.

Mr. Mathias.—What I mean is this: If it is used for other purposes and the match manufacturers now desired to use it, there would be a good deal of competition and the price would run up.

Mr. Barrington.—Altogether they are paying Rs. 35 at the present moment in Rangoon. If they have plantations on a fairly large scale, they could get it at Rs. 15 to Rs. 20 a ton.

Mr. Mathias.—Would there be any objection to its use—I am not speaking of plantations—as it is naturally grown on the ground that it was required for agriculturists?

Mr. Barrington.—There are certain reserves set apart outside Rangoon.

Mr. Moodie.—Very little is used just now.

Mr. Barrington.—There are a number of reserves actually in places which are not easily accessible.

Sites for plantations.

President.—If you are to select sites for planting these classes of trees, you would naturally prefer Tenasserim division.

Mr. Barrington.—I think it should be just above Moulmein. On the other hand the Insein division has a good deal of land which could be planted up.

President.—This 7,000 tons you have mentioned may be taken as permanent supply.

Mr. Barrington.—Yes, in trees rather than tons.

President.—More or less permanent?

Mr. Barrington.—I should think there would be a slight drop in the tonnage.

Mr. Mathias.—You say that there are a number of areas in the Insein division which could be planted up. Is there any difficulty in obtaining labour?

Mr. Atkinson.—No, but there is only poor and inefficient labour.

Mr. Mathias.—I understood the limit of your planting operations is about 4,000 acres a year.

Mr. Barrington.—In this circle I don't think there is any particular limit.

President.—We were told that the labour available would not extend to about more than 4,000 acres.

Dr. Matthai.—I think what Mr. Watson said was 5,000 acres for the whole province.

President.—That is to say if you get the shifting labour.

Mr. Barrington.—One would have to use *Taungya* labour.

President.—Is there much of that in the Tenasserim division?

Mr. Barrington.—Yes.

President.—One thing is rather important. If possible the plantation should be concentrated.

Mr. Barrington.—Yes.

President.—So that either the wood is accessible if it is to be exported in the log from that one part, or it would be still better if a factory is established in the neighbourhood of that plantation.

Mr. Barrington.—Yes.

President.—There doesn't seem to be any great advantage in exporting wood in the log to India except that they might have some local market or some other advantage. Apart from those considerations, I think it may be as well to consider whether if plantation is undertaken, it should not be confined to more or less one locality on a fairly large scale where labour is available both for plantation and reasonable quantity for industrial purposes.

Mr. Barrington.—I don't think there is any doubt that it will be started in Insein. We have already got a market in Rangoon and the only thing we are up against is the testing of species.

President.—If you can select areas sufficiently large in the neighbourhood of Rangoon, it is still better. On to-day's requirements, supposing

India got all its wood from Burma, I think 100,000 or 120,000 tons would be required. That is just not allowing for any increase.

Mr. Barrington.—At present it is not possible on that scale.

President.—But eventually.

Mr. Barrington.—Adamjee's are prepared to take somewhere about 5,000 tons a year. That means 5,000 acres. If we get 5,000 acres and plant that up as soon as we know where we are, I think we can keep this factory going.

Mr. Mathias.—Adamjee would take about 11,000 to 12,000 tons if he doesn't import from the Andaman Islands.

Mr. Barrington.—I thought they told me that they were getting only 5,000 tons.

Dr. Matthai.—He gets 5,000 tons from Burma and there is a proposal that he should get 7,000 tons from Andamans.

Mr. Mathias.—12,000 acres would be impossible to plant up in the Insein?

Mr. Barrington.—It is a bit of a job.

Mr. Atkinson.—These areas on the railway side have been reserved for village supply. They will have to be on the Pegu side. I have discussed this with Mr. Scott and do not agree. Probably 10,000 acres or more would be planted near the railway.

Mr. Mathias.—They clear the coupes and you plant up.

Mr. Barrington.—That would be quite suitable.

Mr. Mathias.—I understood that there would be difficulty in clearing owing to the classes of timber there. Owing to the distance no contractor would find it worth while to clear them.

Mr. Atkinson.—I don't think so. It has not been done merely because that reserve on the east side of the Yoma has not been worked. That side of the division has been left to work itself. One could run through a road in any direction. It is almost flat and I don't think there will be any difficulty.

Mr. Mathias.—There will be no difficulty.

Mr. Atkinson.—None at all.

President.—That is a bigish area in the Mahuya reserve.

Mr. Atkinson.—90 square miles.

President.—That is about 5,000 acres a year. What cycle do you take?

Mr. Barrington.—30 years.

President.—What tonnage would you allow per acre?

Mr. Barrington.—25. I don't think that it is safe to take more than that. We are certain to be up against soils which are not suitable. It is practically impossible to get a large block of land which is entirely suitable.

President.—One of the suggestions was that you would select different localities. That means you have to bring all the logs down to one big centre afterwards. Whereas if you confined the plantation more or less to one locality, either you could have the factory in the locality or carry it elsewhere.

Mr. Barrington.—We should want over 5,000 acres. But 1,000 acres is the absolute outside limit that we can get for plantation in one division in one year.

Mr. Mathias.—Letpan will grow on the banks of the river. Sawhya on the other hand will grow on the slopes. The soil suitable for different trees might be in different localities.

Mr. Barrington.—The whole trouble in planting is to get the requisite number of cultivators.

President.—If you are to employ outside labour. . . .

Mr. Barrington.—It is more or less a specialist job.

Mr. Mathias.—I just asked you whether there would be any difficulty in regard to labour.

Mr. Barrington.—I was contemplating an outturn of 5,000 tons. We are now talking of 100,000 tons.

President.—As regards the immediate requirements, it does appear that in the different scattered areas you may have a supply of 20,000 tons. You can get that from the whole of Burma without plantation.

Mr. Atkinson.—I don't think that we can get the whole outturn concentrated in one area.

President.—A big factory like the Western India Match Factory will require twice the quantity of what Adamjee's would require. We do not know what the position may be.

Mr. Mathias.—Do you think that plantation can be undertaken for 20,000 tons?

Mr. Barrington.—Yes. 750 acres a year—that might possibly be worked.

Mr. Moodie.—That is for one division, viz., Insein division.

Dr. Matthai.—There would be no difficulty as regards labour?

Mr. Barrington.—It is extremely difficult to say because nothing like that has been attempted before.

Mr. Atkinson.—There would certainly be difficulty but we might be able to get labour for that.

President.—Do you suggest that 20,000 ton unit would be a suitable one for a division for plantation in the Tenassarim and Insein divisions?

Mr. Barrington.—I should say that we could work up to 20,000 tons a year from plantations in three different centres. You will have to remember that we have not got accessible land for a plantation covering so many acres in one block. The trouble will be to get so large a concentration as that. It means 200 families. It will take some years to recruit these people and get them removed from other places and concentrated in one place.

President.—We are taking a fairly long view. I don't want you to do it in a short time. You can do it in 15, 20 or even 30 years.

Mr. Barrington.—I think that that is about the maximum that we can do.

Mr. Atkinson.—We do not know what we are going to let ourselves in by planting species in these areas in the way of disease.

President.—All these things have to be studied.

Mr. Atkinson.—You ask for trouble by undertaking plantation in a compact area.

Dr. Matthai.—There is less liability of getting any disease if you mix the species?

Mr. Atkinson.—Yes.

President.—Letpan is not as suitable according to our present information as the other species but it grows almost anywhere on the alluvial soil.

Mr. Barrington.—Yes, on sandy soil.

President.—If you eliminate Letpan from this special plantation and have it where it naturally grows, in that case a much smaller quantity may suffice. Sawbya, Malettanshe and Gwe are supposed to be very good for splints.

Mr. Barrington.—Gwe is too soft for veneers.

President.—Gwe is good for splints. He thought that Yamane is also good.

Mr. Barrington.—It is very easy to grow.

President.—It would be for the forest people to select the area having regard to the costs and the species that may grow together.

Mr. Barrington.—I don't think that there is the smallest doubt that we can grow at Rs. 10 per ton.

President.—Supposing you selected this area, then it would pay everybody to get the communication improved. In that case you would reduce the cost of transport and get more royalty.

Mr. Barrington.—I believe that the civil authorities are going to have a pucca road out there.

Dr. Matthai.—When you speak of 750 acres, do you mean entirely reserve lands?

Mr. Barrington.—Yes.

Transportation.

President.—In the Mahuya reserve, we have been told that practically in the wet months they can float logs.

Mr. Atkinson.—Yes.

Mr. Barrington.—They can float the logs in any direction, that is the difficulty.

President.—In the dry weather they have got to bring it down to Hlegghu.

Mr. Atkinson.—Yes.

President.—They can rail the logs from there.

Mr. Atkinson.—Yes.

President.—There must be an alternative method of transport for the dry weather. If you have an alternative method, say a light railway, you may just as well use that during the monsoon.

Mr. Atkinson.—Floating is a good deal cheaper. It would be very expensive to put up a light railway. The whole of that area is under water up to one foot. Only boats can go then.

President.—In the dry weather you will have recourse to carts.

Mr. Atkinson.—Yes. If the road was reasonably good they could probably use 4-ton lorries which would presumably be the cheapest method.

President.—Hlegghu is about 25 miles from here.

Mr. Atkinson.—Roughly that.

President.—And the remainder would be about 30 miles.

Mr. Atkinson.—Altogether from Rangoon or what? It is only 18 miles from Paunglin to Hlegghu.

President.—That is outside the forest.

Mr. Atkinson.—Yes.

President.—Anyhow for a limited plantation it would be a suitable area.

Mr. Atkinson.—Yes, from the point of view of extraction.

President.—Who is the Conservator in charge of the Tenassarim Circle?

Mr. Barrington.—Mr. Milner.

President.—What would be the lead from the forest to Moulmein or Tenassarim, if you had a plantation there?

Mr. Barrington.—In the Tenassarim Circle we have not got large reserves.

President.—In that case for plantation what would you do?

Mr. Barrington.—That brings in the question of land, the cost of which will be some Rs. 10 per acre.

Mr. Moodie.—Moulmein has got good streams in which you can float.

Dr. Matthai.—On private land there would be the question of land revenue.

Mr. Barrington.—We would not take up anything which pays revenue to Government. We will take up more or less waste land.

President.—For waste land you would have to pay some compensation.

Mr. Barrington.—Yes.

President.—Is it central Tenassarim or southern Tavoy?

Mr. Barrington.—That is all Tenassarim. That is a division which I have not seen. I understand that there is a good deal of match wood there. That is just the type of forest which is likely to contain match wood more than any other. Mr. Robertson knows all about Tenassarim. He has just been down there. He is one of the three officers who made a special examination of the question of extraction of jungle weed.

President.—Has he written a report on that?

Mr. Moodie.—He has just returned from that place. He is writing one.

President.—There are really no insuperable difficulties about plantation provided you don't have to undertake more than 750 acres in your division.

Mr. Atkinson.—No.

Mr. Barrington.—In Hlaing Circle we can do that.

Conditions of growth of match wood trees.

President.—Who is supposed to be studying the conditions under which these soft wood trees grow?

Mr. Atkinson.—I am planting about a dozen species this year. They have not gone in yet. They will go in the reserve on the other side of the Yoma. It is just an experimental plot covering about 19 to 20 acres.

President.—Why have you selected that area?

Mr. Atkinson.—Most of our workers are on that side at present.

President.—That runs along the railway line.

Mr. Atkinson.—Yes.

President.—Is the soil quite suitable?

Mr. Atkinson.—Yes.

Dr. Matthai.—Would the soil be representative of the whole area, that is to say practically any kind of soil is included in it?

Mr. Atkinson.—Yes. More or less you get an alluvial soil along the stream running up, as I said, to the Yoma hills.

President.—Has the area been cleared?

Mr. Atkinson.—It is being cleared and in the rains we will plant it.

President.—If you were to undertake plantation what would you do? Would you do clear felling?

Mr. Barrington.—Yes.

President.—I suppose in one year you cut the trees down and then they are burnt.

Mr. Barrington.—It is cut down in February and is burnt the same year, in April.

President.—You can use it in the same year?

Mr. Barrington.—Yes. Incidentally we know all about maulettanshe. It grows in every forest. I don't think there will be very much difficulty in planting that: It grows very fast.

President.—That is supposed to be very good for splints.

Dr. Matthai.—What is the period of growth?

Mr. Barrington.—I am not sure, but probably it is about 30 years, I think. We have to cut it out of our teak plantations very often as it outgrows teak.

President.—Maulettanshe splint is quite good in appearance and you say this maulettanshe tree grows easily?

Mr. Barrington.—It grows up like a weed and we have to cut it out yearly. If you have a plantation, maulettanshe often covers the whole ground. It grows very quickly.

President.—In order to prevent disease from spreading you find it necessary to cut down some of the species which are suitable for splints, so

that it does appear that these trees grow in this reserve all right. Whether it would grow in other parts of Burma that has to be proved.

Mr. Barrington.—That is so.

President.—What about sawbua? It grows in larger quantities than any other species, I suppose?

Mr. Barrington.—Faster? If certainly isn't the most common species, it may be the common match wood species.

President.—I take it this note of the 24th of March must have been prepared rather in a hurry for us. I asked Messrs. Robertson and Blanford for information on this point. I am not so sure that this argument that teak and pyinkado are the more valuable trees assumes that there is more market for teak than match wood.

Mr. Barrington.—I should say if they are to be made available in sufficiently large quantities they ought to be planted.

President.—First of all let us take the natural regeneration.

Mr. Barrington.—The natural growth in the forest reserves is so scattered that it would cost a great deal to extract them.

President.—I do not know what the nett royalty on teak or pyinkado amounts to, but if you took Rs. 15 for pyinkado and Rs. 20 or 25 for teak . . .

Mr. Barrington.—The average will be somewhere about Rs. 30 even for pyinkado and more for teak.

President.—If you take Rs. 30 and if you take the natural growth at 150 years, and then take 30 years for the match wood and Rs. 10 as royalty, then this match wood is more valuable than teak wood taking the natural growth. Up to now of course you have had no market, that is admitted, but the moment you are beginning to get a market, at Rs. 12-8-0 certainly match wood is more remunerative.

Mr. Barrington.—Can you rely on Rs. 12-8-0.

President.—You can rely on Rs. 12-8-0 provided the total cost does not exceed Rs. 40 on to-day's costs. You have learnt the business of selling match wood.

Mr. Mathias.—If you had a match wood plantation you could fairly rely on a very much bigger royalty, as the cost of extraction would be less.

Mr. Atkinson.—In a teak plantation we would get up to Rs. 60 on a 80 year rotation.

President.—You have got this natural resource in teak, but I think the sooner we get rid of this idea that it is the teak that pays the Government and nothing else does, it is better for all concerned.

Mr. Barrington.—We are sure about the market for teak, while we are not sure about the market for other timbers.

President.—That is perfectly true, but we are now assuming that you have got a market for the match wood. Nobody really knows yet what the natural resources of the forest are in match woods even to-day and we cannot say what the value of the wood is. Let me put it to you this way. Take the Mahuya reserve for instance where this match woods grow. You have given the figures pyinkado; they are 25 per cent. more than match woods and the wood is heavy. Now take a mixed reserve, how many tons of teak would you get out of that?

Mr. Barrington.—The average is between a ton and 1·5 ton to an acre. An average acre has got about 15 tons of possibly 30 species, of that teak and pyinkado are about 1 and 1·5 tons.

President.—And the match wood is about a third?

Mr. Barrington.—Yes.

President.—If you take the rotation of teak and pyinkado as 100 or 150 and take the rotation of match wood as 30 years, the commercial value is not very much smaller.

Mr. Moodie.—We are going into it and will see how it works out.

President.—I would like you to work out all these figures as regards this particular reserve and to see how teak and pyinkado fare with regard to rotation, and the rates you expect to get in comparison to match wood, assuming that there is a steady demand for match wood. I am talking merely of the natural forest and will come to plantation later.

Mr. Atkinson.—Do you accept 30 years as the natural rotation for these match woods?

Mr. Barrington.—I think 60 is the figure for natural growth. Even so I admit on paper you might make it look like a good financial proposition, but I don't think any forest officer would follow that very far. We have got to look about a century ahead . . .

President.—Get rid of a hearsay like that, Mr. Barrington!

Mr. Mathias.—Do you say the match wood takes 60 years to grow?

Mr. Atkinson.—I think so. I should say nearer 60.

Mr. Barrington.—15 years felling cycle leaving everything under $4\frac{1}{2}$ feet.

Mr. Mathias.—Extractions made in Japan seem to indicate a rotation of 20 years.

Mr. Barrington.—I admit by planting it may very likely come down to 20 years. You have got to average out all those which are suitable and those which are not, and for those which are really suitable 20 years is by no means optimistic. But you have got to put it much higher because there are large blocks of soil where the trees are not suitable.

Return on plantations.

President.—As regards plantation Mr. Watson has given us a statement. If we take 20 years rotation, and not 25 as Mr. Watson gives it, it comes to 10·74 royalty to give you a return of 4 per cent. compound interest.

Mr. Barrington.—It is very high cost.

President.—If you take the average at that figure it may come to Rs. 8 or 9 on 30 years rotation.

Mr. Barrington.—I think that is about right.

President.—That would cover all your costs and pay you compound interest and everything excluding the cost of the land. In the case of a teak plantation this cost would go on for 80 years.

Mr. Barrington.—You can get up to 50 tons in 80 years, that is on the best soils.

President.—What royalty would you have to get on that?

Mr. Barrington.—At 4 per cent. compound interest it would have to be in the neighbourhood of Rs. 1,200 an acre. Near Rangoon you will get about Rs. 3,000. In match wood you get Rs. 250 in a much shorter period.

President.—That is to say if you get Rs. 10 but the point is, in a case of this kind where you have a plantation which would reduce the cost of transport, the margin of the royalty is higher. In the case of teak, even if you planted teak you would not plant it with reference to its accessibility to a factory but here you would be doing that, and therefore supposing the total landed cost was going to be Rs. 35, which leaves you Rs. 23, if these costs were reduced to Rs. 15 which they might very well be, then in that case your royalty may go up to Rs. 15. In that case it does seem to me that a plantation of match wood is on the whole, from the Government point of view, a much better commercial proposition than teak.

Mr. Barrington.—I don't think they are alternative, are they?

President.—I don't say alternative, but I say too much attention has been paid to teak.

Mr. Barrington.—I have not the slightest objection to having plantations for the necessary development of match wood, but in the meantime it would take two or three years to see how they grow.

Mr. Mathias.—It is desirable at any rate that the forest department should make experiments and there is no opposition to that on your part?

Mr. Barrington.—Not the slightest. As a matter of fact experiments were taken up as far back as 1919 as regards sawhya, letpan and so on.

Dr. Matthai.—In the Mahuya reserve are hard woods being worked just now?

Mr. Atkinson.—Not now. They will do it from next year. We have got the new additional working plan which is about to be sanctioned.

Dr. Matthai.—Then it would be in the hands of different contractors.

Mr. Barrington.—It would probably be in the hands of small contractors.

Dr. Matthai.—But you have different sets of contractors working in the area, some on hard wood and some on soft wood.

Mr. Barrington.—Yes.

Dr. Matthai.—Would it cause any difficulty?

Mr. Barrington.—No.

Dr. Matthai.—What about the traffic down the stream?

Mr. Barrington.—Hard woods don't come down by stream at all.

Mr. Atkinson.—They come by cart.

Mr. Mathias.—Won't they float?

Mr. Atkinson.—No.

Dr. Matthai.—They can be rafted.

Mr. Barrington.—Yes, with bamboos where there is a fairly good stream.

Mr. Mathias.—There is not much teak in the Mahuya reserve.

Mr. Atkinson.—Not in the Mahuya but there is quite a lot in the Paunglin reserve.

Mr. Mathias.—There would be no difficulty about clearing out all the hard woods.

Mr. Atkinson.—None at all. Where we have done felling and clearing in the accessible areas, we have made something like Rs. 40 an acre.

Mr. Mathias.—It would be a profitable business for Government to clear the hard woods, supposing the plantation of match woods were undertaken.

Mr. Atkinson.—I should think so.

President.—That is to say you have no difficulty in disposing of all the timber.

Mr. Atkinson.—We have not tried Mahuya.

Mr. Moodie.—There is not likely to be any difficulty.

President.—It would not be necessary to burn it all up.

Mr. Atkinson.—No.

Mr. Mathias.—I suppose as against the cost of plantation we might reasonably take a proportion of the royalty which Government got for hard woods in those particular forests. If you were to fell and clear, you would not only cut hard woods of 5' girth, but also trees of smaller girths. You might take that against your cost of plantation.

Mr. Barrington.—On the contrary it will be cutting the capital.

Mr. Atkinson.—That is always presupposing that plantation of match woods would be a success.

Mr. Mathias.—You don't think it would be fair to take a proportion of that as against your cost.

Mr. Barrington.—The generally accepted view is that the old crop is separate and any cutting into it can only be credited to it and not to a new plantation.

Labour required for plantations.

President.—In these plantations how many people would you require per acre to do the planting?

Mr. Barrington.—Shifting cultivators generally do $3\frac{1}{2}$ to 4 acres.

President.—What does a family consist of? Do you take it as three or four people?

Mr. Barrington.—Generally husband, wife and a son.

Mr. Moodie.—And a few bachelors.

President.—You require one person really speaking for one acre.

Mr. Barrington.—Yes, one man. Some of them have families; some of them don't have families.

President.—What do they do?

Mr. Atkinson.—They live in the middle of the areas they are cultivating.

President.—And then they go on.

Mr. Atkinson.—After reaping the crop (October and November) they leave the old plot and start selecting the next.

President.—Here the plantation would mean they would have to be there constantly.

Mr. Atkinson.—Yes.

President.—You cannot have a shifting population.

Mr. Barrington.—They only stay on in a patch for cultivation.

Mr. Moodie.—Once they reap their crops, they are not interested in it.

President.—When you are doing this plantation, they won't have other areas to cultivate.

Mr. Moodie.—We try and find work for them in the forests.

President.—It means this: You would have to have a sort of constant population which would have to give up its habits if you are to use the same population to do the work of plantation. Does it not follow?

Mr. Atkinson.—After we have done plantation, we should not have enough work for these people except during the rains.

President.—Supposing you did 20,000 acres, then you would go on planting 750 acres a year.

Mr. Atkinson.—Yes.

President.—Will that same population be available for 15 years?

Mr. Atkinson.—Yes. Each year they start a new plot. As soon as they finish with that, the following year they go on to the new area, that is the next 750 acres. The same lot of men plant.

President.—They would cultivate that area only for one year.

Mr. Barrington.—Yes.

President.—And then they move on.

Mr. Barrington.—It is not permanent cultivation in any sense. While they plant our trees, they will plant their own crops and the whole thing is done together.

President.—What crops do they grow?

Mr. Barrington.—Hill rice chiefly.

President.—That doesn't interfere with your own plantation.

Mr. Barrington.—No.

Mr. Mathias.—You charge them nothing as rent for the land.

Mr. Atkinson.—No. They are paid about Rs. 12 an acre.

Mr. Mathias.—And they get their own crops.

Mr. Atkinson.—Yes. We generally pay their taxes.

President.—I take it for plantation of 20,000 acres you require 200 families.

Mr. Atkinson.—More, one for $3\frac{1}{2}$ —4 acres.

President.—That doesn't seem a frightfully big number.

Mr. Atkinson.—No.

President.—Supposing you have to do it by other labour.

Mr. Atkinson.—That would be very much more expensive. We should have to pay daily wages.

President.—Then how many labourers you would have to employ?

Mr. Barrington.—So far as I remember it costs Rs. 28 in the first year as against an average of Rs. 16. 28 working days per acre—that is an average figure for Rs. 28 a month. We pay *taungya* cutters Rs. 12 and the tax comes to Rs. 4 making a total of Rs. 16.

President.—That is in the first year.

Mr. Barrington.—In the second year I should think Rs. 6 to Rs. 7 would be the cost of weeding, because the area would be weedy and dirty if it not kept under proper agricultural system. Mr. Watson has lumped together the cost for 10 years and I have tried to keep separately.

Dr. Matthai.—Rs. 16 represents clearing and planting.

Mr. Barrington.—The payment of results when we take over *plus* capita-
tion tax and any other tax due to Government. We don't strictly pay for the operations. We pay for the trees, handed over, *i.e.*, an average of Re. 1 per 100 seedlings and there are 1,210 per acre.

President.—You estimate the cost as Rs. 257.

Mr. Barrington.—Compound interest right up to 30 years.

President.—How much does the cost of formation come to?

Mr. Barrington.—Up to the end of the first 10 years if they were successful, it should be about Rs. 30, but I have given the average at Rs. 50.

President.—It would bring the royalty on a 30 years' rotation at Rs. 6.85.

Mr. Barrington.—In the neighbourhood of Rs. 200.

President.—We will call it Rs. 200 to Rs. 240. That would bring the royalty down to less than $\frac{1}{4}$ th on a 30 years' rotation on these figures.

Mr. Barrington.—It does.

President.—Anyhow even if you have to employ other labour, it would not increase the royalty by more than couple of rupees.

Mr. Barrington.—I think it would still pay, but it would be very much more difficult, because it would require very much more supervision. Then there is the question of staff. You will have to have European Assistants. In the first year it will be very difficult.

Mr. Mathias.—This total cost of Rs. 147 in your calculation on page 4 of your note is for 30 years.

Mr. Barrington.—30 years and 25 tons.

Mr. Mathias.—And Rs. 2 is for supervision.

Mr. Barrington.—Yes. I think Mr. Watson's 40 tons is liberal as an average. There is no doubt that we can realise that, if we stick to the best soil.

Mr. Mathias.—It makes a difference of about Re. 1 a ton if you take 30 tons. He takes 35 tons for 25 years and 40 tons for 30 years.

Mr. Barrington.—That is a high average.

President.—You are disposed to take 30 years and 25 tons, is it not so?

Mr. Barrington.—Yes.

President.—Then your figures would go up to Rs. 10. You don't get more than 4 per cent. per acre on teak plantation.

Mr. Barrington.—No. There is no financial objection provided we get Rs. 10.

President.—If you were to employ other labour, I suppose the cost may go up by Rs. 30 or Rs. 40.

Mr. Barrington.—I should think by about 50 per cent.

President.—To that Rs. 257 you will have to add Rs. 173 bringing the total to Rs. 330. That would just push up the royalty to Rs. 13 instead of Rs. 10.

Mr. Barrington.—Yes.

President.—Yes might be on surer ground. If you are to do it on a bigger scale the only method would be to employ other labour.

Mr. Barrington.—I am not sure. I should try and get as many *Taungya* cutters as possible. They leave the ground in a much better condition.

President.—Is this *Taungya* population reluctant to move from one division to another?

Mr. Barrington.—Even 10 miles away it is rather difficult.

President.—You have to confine yourself more or less to the same area to get the population.

Mr. Atkinson.—I could get a certain number from Mahuya.

President.—Are they hill people?

Mr. Barrington.—Many of them are Karens.

Dr. Matthai.—The reason why they shift from place to place is that they cannot raise a crop after a certain number of years on the same land.

Mr. Barrington.—Roughly speaking they like to have 15 years interval between cultivation, leaving the jungle to grow up 14 years for each year's cultivation.

Estimate of supply of match wood trees.

President.—In paragraph 4 you talk of Mr. Scott's estimate. I am not able to follow the criticism. You say: "That the estimated annual outturn for all match woods for the whole division is 7,000 trees of 4½ feet."

How do you get that?

President.—The figures supplied by Mr. Watson show more trees. I don't know whether I am wrong. As regards this 287,251 acres that you have given, is that for the whole of Insein?

Mr. Barrington.—Yes.

President.—The number of trees I think is more than that.

Mr. Barrington.—This is the yield per year. Obviously you cannot cut away all the trees in one year.

President.—Mr. Watson says in his note that the total stock of available trees may be taken as follows:—

Paunglin—7,781 trees of 18" and over.

Mahuya—14,848 trees of 18" and over.

Western Plains—11,186 trees of 18" and over?

Mr. Barrington.—Is that the total ground stock?

President.—No. It is the enumeration I think.

Mr. Barrington.—You can take the annual outturn as 7,000 per year, viz., 3,000 each for Mahuya and Paunglin and 1,000 for the Western Plains.

President.—That is what you say.

Mr. Barrington.—Yes.

President.—He takes a 15 year cycle and takes all trees from 8 to 12 inch. diameter.

Mr. Barrington.—The assumption is that you get the same number of trees 15 years hence. There will be a slightly diminishing tonnage, because the very large trees will have to be taken out first.

President.—Apparently there has been some felling done in this reserve because the bigger trees are much fewer than one would expect. I suppose that Lim Chin Song and other people worked that.

Mr. Barrington.—Yes.

Dr. Matthai.—If you look up Table II showing the estimated number of match wood trees of 8" diameter and over, you will see against Sawhya the number of trees of 16" to 20" is 8,000 whereas the number of trees of 20" to 24" diameter is about 3,000.

Mr. Barrington.—Teak also grows more or less in the same proportion.

President.—Of course you cannot tell how long these trees would take to grow from 12 to 16 inches to 16 to 20 inches?

Mr. Barrington.—No.

Dr. Matthai.—Do these trees grow at a uniform rate?

Mr. Barrington.—Very irregular.

Dr. Matthai.—Do they grow fast in the early stages?

Mr. Barrington.—We could not tell you that, probably they do.

President.—Then, in paragraph 6, there are some figures missing.

Mr. Barrington.—I have not been able to get them yet.

President.—Mr. Blanford told us that this plantation was extremely inaccessible.

Mr. Barrington.—Yes.

President.—If you have a plantation in an inaccessible area how would the data help you?

Mr. Barrington.—It is simply a question of soil.

President.—If you take the best soil.

Mr. Barrington.—We want to know the rate of growth. It does not matter whether the plantation is accessible or not.

President.—The soil is particularly favourable.

Mr. Barrington.—Yes.

President.—The best thing would be to take an average soil and a reasonably accessible locality.

Mr. Mathias.—It is not a commercial experiment.

Mr. Barrington.—No.

Dr. Matthai.—The dimensions for 1927 would represent 8 years' growth.

Mr. Barrington.—It was planted in 1919 and I saw it in 1925, that is after 6 years' growth.

President.—I see in this reserve Letpan does not grow very much.

Mr. Atkinson.—No, not in the Mahuya reserve.

President.—How about the Tenassarim division?

Mr. Atkinson.—There is a lot of natural Letpan down that side.

President.—The quantity must be very large.

Mr. Atkinson.—I don't know whether the quantity is large in the sense in which we are using. It will be only hundreds of tons and not thousands of tons.

President.—It is a tree which is very big.

Mr. Barrington.—Yes.

President.—Would you get on an average more than a ton per tree?

Mr. Barrington.—It depends on the minimum girth. In the case of really big trees, it will be more than a ton per tree.

President.—You have no idea even as regards Letpan as to the quantity available?

Mr. Barrington.—I am afraid not.

President.—Can you apply this method—to enumerate the trees in a particular area and then assume that that proportion would apply to the rest of the reserve? As regards Letpan can you do that?

Mr. Barrington.—I don't think that there are any estimates except in the case of Paunglin and Mahuya. We know nothing about stock.

President.—Of course we would have been very glad if we had some idea of the total quantity of Letpan available. Though it is not suitable for splints, it is all right for veneers and packing cases.

Mr. Barrington.—Are you speaking generally?

President.—Yes. The Insein soil does not lend itself for the growth of Letpan.

Mr. Barrington.—No. It is distinctly a tree which grows easily on sandy alluvium soil.

Dr. Matthai.—If you had a fresh plantation along the river side, how many years would it take?

Mr. Barrington.—It depends on the rotation. Of course given suitable soil, you could run to 20 to 30 tons in 20 years.

President.—Would you have to employ *taungya* labour?

Mr. Barrington.—Something similar but not quite the same thing. On these river banks there is less cutting to be done.

President.—In paragraph 7 you talk of reservation of over 12,060 acres of soil of this kind for grazing at a cost of Rs. 1,20,239. Do you mean acquisition?

Mr. Barrington.—The reservation is under the Forest Act. It amounts to acquisition.

President.—That is to say, you declare that a certain unreserved forest has become a reserved forest.

Mr. Barrington.—Yes, by buying up rights at Rs. 10 per acre of cultivation, cutting, felling, etc.

President.—Do you take those rights into account?

Mr. Barrington.—Yes. That is the sort of area which is favourable for planting *Didua* Letpan.

President.—That is in Pyinmana Division.

Mr. Barrington.—Yes.

President.—Do you have to take actual legal proceedings?

Mr. Barrington.—A Forest Settlement Officer can pass orders subject to the appeal to the Commissioner and the local Government.

President.—That is purely a forest procedure and not civil.

Mr. Barrington.—Yes. It is done by a Forest Settlement Officer.

President.—It is not the same thing as the land acquisition procedure.

Mr. Barrington.—No, it is a different procedure.

President.—You adopt more or less the same method. You give them notice.

Mr. Barrington.—Yes, three months' notice.

Dr. Matthai.—You adopt the same method of assessing the value of the rights.

Mr. Barrington.—Yes.

President.—I think it costs some money—Rs. 5 or Rs. 10 as the case may be.

Mr. Barrington.—Yes.

Mr. Mathias.—There is no appeal to the civil court.

Mr. Barrington.—No.

Dr. Matthai.—Why do you say "we must work for a minimum charge of Rs. 10 a ton"? I thought that you would work for a maximum.

Mr. Barrington.—Our charges must be cut down so that Rs. 10 would pay.

Dr. Matthai.—That is the minimum you would assume.

Mr. Barrington.—Yes, unless we get Rs. 10 it is not worth trying.

President.—Your estimates seem to be more or less on the safe side. You take first of all 30 years rotation and then you cut down the yield to 25.

Mr. Barrington.—I have seen and done so much planting that I don't want to be too optimistic.

President.—If Government were to adopt your figures, they would be on the safe side.

Mr. Barrington.—Yes.

President.—Mr. Moodie, are you in closer touch with the match industry now than before?

Mr. Moodie.—I have not taken any interest at all in the match industry. I am only concerned with the selling of teak in Rangoon.

President.—Who is supposed to study the question of match wood?

Mr. Moodie.—It is Mr. Robertson.

Mr. Mathias.—He is the Conservator of Forests, Utilization Circle.

Mr. Moodie.—Yes.

Mr. Mathias.—He has nothing to do with the actual investigation and marketing of soft woods.

Mr. Moodie.—He is supposed to do the investigation and records work. Soft woods are sold as standing trees of territorial Conservators.

Dr. Matthai.—Is the Tavoy Division part of the Utilization Circle?

Mr. Moodie.—Yes.

President.—Do you do much business in soft wood?

Mr. Moodie.—None at all. Government is extracting teak timber. It is done by our contractors and sent down to Rangoon.

President.—I understood that Government was paying more attention to the soft woods.

Mr. Barrington.—Yes, from the research point of view, that is to say testing strength and trying to develop markets for that. It is not done on a commercial scale at all.

President.—What I wish to know is that if plantation is undertaken who would be put in charge of it?

Mr. Barrington.—The Divisional Forest Officer would be put in charge of it, with a good deal of advice from the Sylviculturist.

President.—Wherever plantation is undertaken, the Divisional Officer of that area would be in charge of it.

Mr. Barrington.—Yes.

The selling of match wood.

President.—As regards the disposal of match wood who will be responsible?

Mr. Barrington.—I would put it up to tender and accept the best subject to the approval of the Forest Ministry and of the Finance Ministry.

President.—The selling agency is the Chief Conservator really speaking.

Mr. Barrington.—It depends on the amount being sold.

President.—What is the limit of the Chief Conservator's powers.

Mr. Barrington.—The contract value of Rs. 50,000 for one year is the limit.

President.—So that any long term license will have to go to the Ministry?

Mr. Barrington.—Yes and to the Finance Member.

President.—The question may arise here as regards the limitation of the right to sell, that is to say it may be necessary to provide that the wood is sold to people engaged, *bona fide* in the manufacture of matches only. Such control I think would be used in the first instance by the Forest Minister and then by the Finance Department?

Mr. Barrington.—Finance is only concerned when we accept a lower tender against a higher.

President.—And then the Finance department may come into conflict with the Industries department. Let us understand exactly what the position

may be in that case. Supposing the Forest Minister, who is in charge of forests as well as industries, came to the conclusion that it would be in the interest of the country to sell this wood, say, at Rs. 10 a ton to a local manufacturer, but the foreign manufacturer comes and tenders through somebody else and is prepared to offer Rs. 20 a ton, then the Finance department may come in and say "we will accept Rs. 20 a ton because we get more money." Is that the position?

Mr. Barrington.—If the Forest Minister is strong he will fight against it.

Mr. Mathias.—Are there no delegation of powers?

Mr. Barrington.—There are delegations. Anything over a limit of half a lakh of rupees (total value) goes to the Finance department.

President.—If the normal practice is to invite tenders then it may happen that some foreign manufacturer may find this wood suitable for his purposes and if he is entitled to take the wood merely on payment of the highest price, in that case though the match industry may be established in this country it will have no raw material.

Mr. Barrington.—All tenders are called on the strict understanding that we are not liable to accept the highest or the lowest tender.

President.—The Finance department in that case may ask why you accepted the lowest tender when there was a higher tender?

Mr. Barrington.—Yes.

President.—Do you have any sales at a flat rate in the forests without calling for any tenders?

Mr. Moodie.—No.

Mr. Barrington.—Any sale in a reserve is invariably either by tender or by auction. In some cases the rate is fixed and the thing is put up for selling of a sort of right of entry (premium).

President.—Has any concession been granted to foreigners in the forests.

Mr. Barrington.—All the teak is in the hands of Europeans.

President.—What I mean is, Japanese, Swedes and so on, that is to say anyone other than a British subject.

Mr. Atkinson.—The Kemendine Match Company were making a bid for a lease of the forests.

President.—Have they got a lease?

Mr. Atkinson.—They tendered for this one which Adamjees have got in the Paunglin Reserves.

President.—We have drawn the attention of the forest authorities to this point and have asked them that during the pendency of this enquiry no such rights should be accorded as far as possible because this is one of the points we are going to investigate. If the Government were to restrict the right of the alien capitalist would the forest authorities be able to trace the cases of *benami* transactions or anything like that where a German or a Swede or a Japanese gets the tender? For instance a big European firm may say "we will buy it and sell it to anybody we like." They may extract the wood and then they may sell to anyone, a foreigner or anyone else.

Mr. Mathias.—In the case of your plantation of match wood, when the trees have grown up there would be no difficulty in restricting the tenders to *bonâ fide* match manufacturers alone?

Mr. Barrington.—Assuming that there are many factories here.

President.—Supposing Government adopted that policy, there would be no difficulty in Burma—would there?—in restricting the supplies of match wood to *bonâ fide* match manufacturers?

Mr. Moodie.—Some other industries may also take these woods.

President.—So far as these particular species of wood are concerned has any other use been discovered?

Mr. Barrington.—They are suitable for making boxes, tea chests and things of that sort.

President.—The whole point is this. If the Government were to declare that policy, how far can that policy be made effective? Will the forest authorities be able to tell the Government "this lease has been taken by X a British subject but really Y who is a foreigner is getting the wood."

Mr. Barrington.—The Commerce and Industry Department should be able to answer that question! The forest department have no means of getting the information.

Mr. Mathias.—I take it that if the system suggested by the President was adopted on a large scale the indigenous match manufacturers will raise something of an outcry if such a case occurred and bring it at once to the notice of the authorities. If that sort of thing came to the notice of the forest authorities, they would bring it to the notice of Government who would in their turn take steps to prevent it. For instance you can insert a clause in the contract by which the tenderer would not be entitled to sell the wood to foreign firms.

Mr. Barrington.—I don't know much about law, but are there not legal methods by which the Swedish Match Company may convert their match factory into a Burmese one and thus avoid that clause?

President.—Or they may float their own companies here. That is what they have done in the case of the Kemendine Match Company.

Mr. Mathias.—Whatever the subterfuges, if it was a fact that the match wood supplies in Burma were monopolised by foreigners and there was a suitable clause in the contract, it would be brought to the notice of the forest department and it would not be beyond the range of possibility for the contract to be cancelled.

Mr. Barrington.—Yes.

President.—Would it be necessary from the forest point of view to give licenses for a long period for a whole area? Could you not auction or call for tenders for a coupe which is ready?

Mr. Barrington.—The extraction agency has to keep a vast amount of labour, there is so much capital involved, so much skilled labour and so on that unless they can see their way at least 10 years ahead, it is not worth their while taking up the job. The same thing applies to match wood. After all if Adamjees knew that they could get only next year's outturn and that they would have to tender from year to year, they would probably have closed their factory.

President.—From the forest point of view would you recommend that these licenses should be taken out by the manufacturers themselves and that they should work them through contractors or any other agency they like, or would you call for tenders only amongst the manufacturers or would you put it up for a general tender for anybody to extract and sell to the manufacturer?

Mr. Barrington.—If the aim is to help the manufacturers they should have the first claim. As things go at present the tender is absolutely open to anyone who comes.

President.—There may be a combination amongst the manufacturers and in order to avoid it you may say "our rate is so much and there are more than one manufacturer who will tender, if not you have got to have it at a flat rate."

Mr. Barrington.—We can also put a flat rate and a premium. We can afford to wait but they cannot.

President.—If there are a few manufacturers there is no risk to Government revenue. You can refuse to sell, that is all.

Mr. Barrington.—Yes.

Extraction.

President.—This sort of extraction would be done more or less by smaller type of contractor. Take a plantation for instance it would not be very difficult to extract?

Mr. Barrington.—I should require a European to be placed in charge. It would be a fairly big show.

President.—So that ordinarily you think it might be advisable to call for tenders instead of giving a license to the manufacturer.

Mr. Barrington.—So far as the manufacturers are doing their own extraction, it is all right, but as regards extraction through a private agency I should think that would be the most satisfactory method of doing it.

President.—There are two ways in which you can do it, the first is to call for tenders from the manufacturers in which case they must pay at least a flat rate of the higher rate as the case may be, and secondly you can say "All right we will call for tenders from the general public and the manufacturers may tender if they like or the contractors may tender if they like." I think from the forest point of view it would be better to call for general tenders, would it not?

Mr. Mathias.—In point of fact as the match wood is not required for any other purpose it is unlikely that there would be any tender except from the match manufacturers.

Mr. Barrington.—I think the contractors will always try to get it because if a contractor can get a partial monopoly he can squeeze the manufacturer.

Dr. Matthai.—When you have got this match wood plantation on a large scale you may get a large number of contractors specializing in this.

Mr. Barrington.—Quite possibly.

President.—Have you got roads to the forests?

Mr. Barrington.—We have done something in Insein so far. We have made practically all the forest roads.

Mr. Mathias.—I take it in actual practice you would require a higher royalty where you have got roads; if you have got no roads they would pay less?

Mr. Barrington.—Yes. We make the main roads and the contractors make branch tracks from them.

President.—Cart roads I suppose?

Mr. Barrington.—Yes.

Foreign interest in factories.

President.—Mr. Moodie, in one of the statements I find it stated that in one of the factories the Japanese have some interest?

Mr. Moodie.—Yes.

President.—What sort of interest do you suggest they have?

Mr. Moodie.—Money interest. I can't remember where I got this information from.

President.—It is rather an important point. They can have money interest in many ways; they can lend money, machinery, raw materials and thousand and one ways. I put the question to a representative of one of the firms and he said nobody has got any interest in any way.

Dr. Matthai.—All that he said was that he got the machinery from Japan.

President.—Of course it would be to his interest to deny it!

Mr. Moodie.—There was some Japanese interest in the Kemendine factory sometime ago before it was burnt down.

President.—He said all the machinery is Japanese; most of the raw materials come from Japan; perhaps the proprietor lives in Japan; he has got Japanese experts to advise him and the process of manufacture and all that is Japanese. It is very difficult to say whether they have got any greater or more direct interest.

President.—As regards the Swedes have you got any information other than that they have got a factory here as well as a selling organisation?

Mr. Moodie.—They are all in the same office building.

Mr. Mathias.—The Swedish factories are not separate Companies.

Mr. Moodie.—They are three different Companies.

Mr. Mathias.—The Rangoon ones, under which Company do they come?

Mr. Moodie.—They have got only one factory.

Mr. Mathias.—They have got a selling agency and a factory here.

Mr. Moodie.—They had also a factory at Mandalay.

Mr. Mathias.—It was separate from the one that you have here.

Mr. Moodie.—Do you mean the Kemendine Match Factory?

President.—The Kemendine Match Company is the same organisation that has been taken over. We don't know whether they have floated another Company or whether they are running the same as part of the Lim Chin Song Factory.

Mr. Moodie.—They have got three different names in their office.

Mr. Mathias.—Is the Burma Match Company a rupee Company?

Mr. Moodie.—I don't know. I can find that information for you.



सत्यमेव जयते

FOREST DEPARTMENT, ASSAM.

Oral Evidence of Mr. E. R. Le GRAND JACOB, I.F.S., Conservator of Forests, recorded at Shillong on Friday, the 24th June 1927.

Introductory.

President.—Mr. Jacob, you are the Chief Conservator of Forests, Assam?

Mr. Jacob.—I am the Conservator of Forests; there is no Chief Conservator here.

President.—How long have you held the post?

Mr. Jacob.—Just over a year—since April last year.

President.—How much of your service has been spent here?

Mr. Jacob.—Of nearly 24 years service I have spent about 20 years in Assam and in the old province of Eastern Bengal and Assam.

President.—Then you know the jungles well personally?

Mr. Jacob.—Yes.

Note on match woods.

President.—We received from the Government of Assam in February last a note written by you, and I would like to examine you on some of the points mentioned therein. The first question is "The existence, quantity and suitability of wood for the manufacture of splints, veneers and packing cases". In answer to that you give eight kinds of trees I am not quite clear from the table as it is printed whether there are only three trees which are suitable for splints, two for veneers and two for packing cases.

Mr. Jacob.—In this Table dash means no and ditto means yes.

President.—What are the usual country names of these trees?

Mr. Jacob.—I did not give them intentionally because the names vary in so many provinces.

No. 1—Kadam.

No. 2—Simul.

No. 3—Assamese Khokan. Bengali Malagri: it is a very common tree in North Bengal as well as in Assam.

No. 4—Ghambar; in Assam it is Gamari.

No. 5—Mallata: I think the name is the same in both provinces.

No. 6—Pine; not available in Bengal.

No. 7—Udal.

No. 8—Sum.

President.—I suppose these eight kinds of trees that you mention grow very fast, do they not?

Mr. Jacob.—No. I have only mentioned those which are available in very large quantities.

President.—Are there any difficulties in extraction?

Mr. Jacob.—No.

President.—We were told that only two out of these could be extracted very easily and in sufficient quantities.

Mr. Jacob.—The Assam Match Company are using bombax and sum: that is just where they are working, but in other parts of Assam there are very large quantities of others. The Assam Match Company is now working in the Nowgong Division where there are enormous quantities of simul. There are masses of it.

President.—All our evidence so far has been that it is a scattered tree and is very quickly cut out.

Mr. Jacob.—That is so, but it is an extraordinarily quick-growing tree.

President.—Do you have large areas where bombax is shown in large quantities?

Mr. Jacob.—Yes.

President.—Have you a map?

Mr. Jacob.—The provincial map is very tiny. The areas where you find them in large quantities are almost the whole way along the Brahmaputra, from Tezpur upwards and up the branches and up the Dihong river; and also further up above Dibrugarh there are masses of it.

President.—Is it a riverine tree?

Mr. Jacob.—Yes.

President.—Is it in any way different from the bombax malabaricum you find in the Deccan or the Central Provinces?

Mr. Jacob.—I fancy it is a very much quicker-growing tree on this side of India, but botanically it is the same; but I should certainly consider the *simul* on this side of India superior to that in any other part of India. It grows to enormous sizes and starts branching out much higher here.

Match wood within reach of the Assam Match Company.

President.—Could you give us any idea of the supplies within a reasonable radius of the Assam Match Company's works?

Mr. Jacob.—The whole of the *simul* is practically outside the reserve forests. Those areas are always liable to be flooded and washed away by the Brahmaputra. It is chiefly in grazing lands and the areas are heavily grazed during the cold weather and the *simul* simply comes up in a mass very often, so that we have got no records at all. As I said, the areas get washed away and new areas grow, and I know myself of an area where there was a growth of a mass of *simul* about 2' to 3' girth in three to four years.

President.—Is there any difficulty about getting supplies from contractors?

Mr. Jacob.—Very little.—There are any number of contractors. Of course the difficulty is that the Assam Match Company's factory is in the wrong place and it has got the wrong machinery.

President.—Why do you say it is in a wrong place?

Mr. Jacob.—Last cold weather at Dhubri the channel had dried up and they had to drag the logs $1\frac{1}{2}$ miles across the sand, to the factory itself.

President.—Once they get their logs on the Brahmaputra there is no difficulty, is there?

Mr. Jacob.—They get them down, but they can get them only within $1\frac{1}{2}$ miles of the factory and from there they have got all the expense of carting them to the factory.

President.—They have practically given up their concession, is it not? They are not working it now.

Mr. Jacob.—They are now working in a new place in the Nowgong district under the ordinary permit system, that is at Rs. 2 per tree. I was wrong; that is the rate in Goalpara; the rate in Nowgong is Rs. 0-0-6 per c.ft.

President.—But still the sand difficulty applies, if, as you say, their factory is badly situated: they have still to drag a mile and a half?

Mr. Jacob.—Yes, in the cold weather only; the water comes in during the rains. They have not made any arrangements to have sufficient logs to last them the whole year round.

President.—Is that due to the system that they just extract as they need it?

Mr. Jacob.—I can only say this: their representative came to see me a short time ago. He himself thinks that the factory is in a wrong place

But he said in future it would be their system to extract during the rains and store them for the cold weather.

President.—Would there be any difficulty, if their factory was situated on the bank of the river, in extracting during the cold weather and floating the logs down?

Mr. Jacob.—I don't think there should be. But there is always the difficulty in the case of the Brahmaputra because the river changes enormously. For 20 years you have deep water in a part of the Brahmaputra, but then it suddenly may change its course leaving the place practically dry. There are certain places, especially where there is a bit of rock and not sand on the bank, where the river remains more or less in a permanent channel.

President.—Where is the factory now extracting its timber from?

Mr. Jacob.—Nearly opposite Tezpur; there is a very large amount of Simul there.

Dr. Matthai.—Is it further away from the factory?

Mr. Jacob.—Yes. But it is on the main river.

President.—Could you give us some idea of the dragging necessary before floating?

Mr. Jacob.—There are large amounts within a few hundred yards. They intend to drag about a mile only.

President.—What amount would that be?

Mr. Jacob.—I have not been to that part for a good many years, but their man's estimate was that they had about five years' supply of simul.

President.—This other tree, *Machilus Bombycina*, does that grow in blocks?

Mr. Jacob.—That grows chiefly along the rivers and also along smaller streams. It is also planted artificially. It is a silkworm tree and is very common all over Assam and it is easy to get the seed.

Plantations.

President.—Has the forest department undertaken any plantation?

Mr. Jacob.—No. The villagers do it themselves.

President.—I suppose the forest department has a good deal of information on record about these trees. In Burma we asked about the possibility of planting various kinds of match wood and we were told that the forest department there had no experience. They hoped to carry on plantation but they could not really tell us how long it would take for the plants to grow or how successful they would be or what the cost would be, because, they told us, if the trees were grown in an artificial manner in blocks disease might develop in them; and so they were unable to give us any estimate of the financial aspect of the question. In Assam, as regards this particular tree would you be in a position to give us some estimate?

Mr. Jacob.—I don't think so because we have not done any planting ourselves.

President.—But your forest officers would have some experience?

Mr. Jacob.—I do not think so. It is merely done in small patches by villagers. We have not done any ourselves.

President.—Is it grown in batches of half a dozen trees?

Mr. Jacob.—More like a couple of acres or so.

President.—Would not your forest officers have experience of any disease which might have broken out?

Mr. Jacob.—I have never heard anything about any disease in it.

President.—What sizes do these trees grow to?

Mr. Jacob.—They are not very large trees; they are medium size. Occasionally they grow to 5' girth, more often about 4 feet.

President.—Do they grow regularly?

Mr. Jacob.—They are straight and round trees.

President.—Do you think they are suitable for matches?

Mr. Jacob.—Yes, they are quite suitable.

Dr. Matthai.—The first tree that you mention, does that grow in large quantities?

Mr. Jacob.—There is a lot of it, but never in large quantities in any one place. It is scattered right through.

Dr. Matthai.—Is that a tree which would be accessible to the Assam Match Factory people where they are working now?

Mr. Jacob.—No.

Dr. Matthai.—We heard a lot about it in Burma. They have been making experiments in match making and it has been apparently found as satisfactory as any other tree they tried.

Mr. Jacob.—It would be the tree to plant in my opinion. It is extremely rapid growing. It grows very straight and it is very very easy to grow from what I have seen.

Dr. Matthai.—What do you estimate as the period of maturity for a tree like bombax?

Mr. Jacob.—My estimate is that it ought to grow to 7' girth in 30 to 35 years.

Dr. Matthai.—There seem to be various estimates of the rate of growth of bombax. Prof. Troup, as you know, puts it at 20 to 30 years, and he says a good average would be about 25 years.

Mr. Jacob.—I think he is on the low side, because it grows very rapidly up to 5 feet girth: in fact I have seen over 5' girth in 12 years, but then it seems to slow up and the wood seems to harden up. Up to the time it attains its main girth, the wood is very soft and spongy. Then the wood hardens up.

Dr. Matthai.—At what girth.

Mr. Jacob.—At about 5'. When the thorns disappear the wood starts maturing.

President.—So that a 3' simul tree would be useless for veneers?

Mr. Jacob.—Quite useless.

President.—Would it be too soft?

Mr. Jacob.—Yes.

Dr. Matthai.—It would be all right at about 4' girth, would it not?

Mr. Jacob.—No. That is one reason why the Assam Match Company is not doing well.

President.—We have received evidence that the smaller trees 3' girth trees—as a rule have a smaller heart and can be worked down to a thinner core, possibly to a 3" core, whereas in the case of larger trees there is a very big wastage by way of heart. We saw in Burma some of the core discarded there running to a foot or 9" in diameter, whereas when we were looking round the Western India Match Factory at Calcutta where they are using what they call genwa—a Sundarban tree—they were working down to about 3 to 4". Of course, the machinery they have installed depends on the trees they are dealing with. So that if here they had installed the machinery to deal with 3' girth trees, and if you cannot use simul unless it is over 5' girth, obviously it would not be a paying proposition to use simul at all; either they will have to use trees of suitable girth or they will have to purchase new machinery.

Mr. Jacob.—I have told them so.

Dr. Matthai.—As a matter of fact it would be better for them to concentrate on *machilus bombycina*?

Mr. Jacob.—Yes, I should have added, "with the present machinery."

Dr. Matthai.—Is *machilus bombycina* of slower growth than *bombax malabaricum*?

Mr. Jacob.—Probably, but we have no record of the growth.

Dr. Matthai.—There is one thing about *machilus*. It is a tree which Troup has not mentioned and apparently it is not a tree which has been tested at Dehra Dun?

Mr. Jacob.—That is so.

Dr. Matthai.—The Assam Match Company were complaining that the splints they got from it were of dark colour and that there was a certain amount of prejudice on that account. Do you think the splints would be dark coloured?

Mr. Jacob.—Yes, it would be darker than simul.

Location of the factory.

Dr. Matthai.—You were talking about the location of the factory. From the market point of view I think Dhubri would have advantages which few other places in Assam would have.

Mr. Jacob.—I do not think so, because it is only on a branch line.

Dr. Matthai.—It would give you access both to Eastern Bengal and Assam? It is on the border between Assam and Eastern Bengal.

Mr. Jacob.—But on the other hand you would always have access to Eastern Bengal by steamer from other places, which would be cheaper.

Dr. Matthai.—Personally you would consider Dhubri on the whole unsatisfactory location?

Mr. Jacob.—I cannot say unsatisfactory from the market point of view because there are both the steamer and the railway routes.

Dr. Matthai.—Does it give them any particular advantage in respect of the market?

Mr. Jacob.—I cannot see any.

Dr. Matthai.—What about labour? In your note you say very little labour is available?

Mr. Jacob.—It is very difficult to house the labour there.

Dr. Matthai.—Where exactly do they recruit their labour from?

Mr. Jacob.—I do not know. I did not ask them. From the look of the people, they appeared to be Chota Nagpuris.

Dr. Matthai.—From the rate of wages that you gave us, it appears that they are not particularly high. I don't suppose in any other province we have got a lower figure than that for unskilled labour in a match factory.

Mr. Jacob.—I think that is the usual rate paid. I think 12 annas is about the average.

President.—In Burma they were paying about a rupee and they said that was a little cheaper than Bombay.

Mr. Jacob.—I do not know exactly what they pay in Dhubri but I don't think that it would be more than that.

Extraction of timber.

Dr. Matthai.—I wonder if you could give us some idea of the transport facilities between the area where they work under their lease and the factory? What distance would they have to drag up to the river point if you take an average feeling centre in that area?

Mr. Jacob.—The actual area where the xsimul was worked is very close to the Manas river. They have an enormous amount up to within half a mile.

President.—Was there any difficulty about rafting there?

Mr. Jacob.—I believe not. It is a permanent stream with heaps of water all the year round.

President.—The evidence of the Western India Match Factory is that they have no difficulty once they get on to the Brahmaputra.

Mr. Jacob.—The Manas river is a swifter stream than the Brahmaputra. But I should think that there is likely to be some difficulty where there is not enough still water to make up the rafts.

President.—Then they could be floated without rafting.

Mr. Jacob.—In that case they will have to collect them on the Brahmaputra. They will never be able to do that because the river is much too large and they will get 70 per cent. of the timber washed away. They cannot do it at Dhubri.

Dr. Matthai.—How exactly is the dragging done?

Mr. Jacob.—By elephants. We are using buffaloes departmentally now experimentally and finding them much cheaper. Up to a few years ago only elephants were used.

Dr. Matthai.—You give the cost of rafting from this particular reserve to the factory as Rs. 3 per ton. If the dragging is over so short a distance as a mile or a half, it could not be expensive. The royalty that you charge is much lower than in many other provinces. It comes to Rs. 1-8-0 a ton under the monopoly.

Mr. Jacob.—Yes.

Dr. Matthai.—If it is Rs. 1-8-0 per royalty *plus* Rs. 3 per rafting and say Rs. 3 for dragging, it comes to about Rs. 8 a ton at the factory which is an extraordinarily low charge for timber delivered at the factory.

President.—In Burma the evidence given by Messrs. Adamjee Hajee Dawood and Company was that the average price at which they got their timber was about Rs. 40 at the factory. That is for sawbya. They start up here at a great advantage over other provinces.

Mr. Jacob.—I don't know if the dragging cost is right. The cost of dragging depends on the supervision of elephants used. I will give you an instance that happened to come to my notice five or six years ago. I was up inspecting the work of a certain timber company. They had got six elephants there: one had escaped and two had been sent to look after that elephant. The fourth and fifth were sick so that there was only one elephant left. These elephants cost them Rs. 90 a month each; that is Rs. 540 a month. I also found that one elephant was dragging on an average two logs of 15 c.ft., that is, three-fifths of a ton a day and that cost them Rs. 540 a month. That is the real part of the work that requires most supervision. You can lose your money or save money very much more easily there than in any other part of the work.

Dr. Matthai.—Then extraction by elephant is likely to be very expensive?

Mr. Jacob.—There is much more capital required. If you keep all your elephants working and fit, then probably it is the cheapest but I think there is much more risk with elephants than with buffaloes.

President.—Supposing, for example, that your trees grow in fairly large blocks and not scattered would you consider that it is a more profitable business for a company with sufficient capital to lay down some sort of a tramway than to extract the timber by elephants?

Mr. Jacob.—That has got to be worked out in each case.

President.—Have you no experience?

Mr. Jacob.—I have had some figures but only for heavy timber, such as sal and not for this kind of timber.

NOTE.—I find we have no figures, which can really compare; when I spoke, I was thinking of our Goalpara Forest Tramway; but we have only figures for extraction over long distances; we are charging at present —/1/- per c.ft. per 6 miles for carriage of purchasers' timber on the tramway; if the equivalent of -/2/- per c.ft. per mile, this would work out at -/8/4 per ton; extraction with elephants could not possibly be done at this rate.

President.—We shall be obliged if you will let us have them. There may be something to learn even if the figures referred to *sal*—the cost of extraction by elephants as compared with the cost of extraction by mechanical transport.

Mr. Jacob.—I will let you have the figures.

President.—You say that there is great difficulty in the matter of supervision of the elephants dragging the timber.

Mr. Jacob.—That is so.

President.—What number of elephants would you usually use? Would you take a herd of elephants if you were to have an extracting operation on a large scale?

Mr. Jacob.—It just depends on the amount of timber to be extracted and the time you want to do it in.

President.—How do you manage about the supervision?

Mr. Jacob.—We have only got a few elephants to use for dragging. Nearly all our main timber is sold standing and the contractor has to do the extraction. He is really on the spot and supervises the whole thing himself.

President.—But in your departmental extraction how is it arranged? Do you send one of your forest officers?

Mr. Jacob.—If it is at all big, we have a gazetted officer in charge.

President.—On what sort of pay?

Mr. Jacob.—Rs. 300 to 600 a month; very often an assistant conservator. I was myself in charge once of extracting timber for about 70,000 sleepers.

President.—In an operation of that magnitude how many elephants would be employed?

Mr. Jacob.—At that particular moment we did not employ any. They were cut into sleepers and then hand-carried to rough cart tracks.

President.—Supposing you were extracting trees in an operation of that magnitude, how many elephants would you employ?

Mr. Jacob.—That would be 150,000 c.ft. or 3,000 tons of timber. An elephant, if fit, can roughly do 2 tons mile a day. Therefore if we allow an average dragging of a mile, that is 2 tons a day, then one elephant during a working season of six months, with 25 days a month, would be able to do 300 tons during the season. For 1,500 tons it would mean 5 elephants and for 3,000 you would require 10. To provide for the sick list and other casualties you would have to add two more.

President.—Apart from the supervision of the elephants and so on, the upkeep of the elephants I suppose includes *mahouts* and costs you Rs. 90 each, so that it comes to roughly Rs. 2 a ton per mile.

Mr. Jacob.—Yes, roughly.

Dr. Matthai.—We might take 2 tons mile a day I suppose as the general dragging capacity of an elephant?

Mr. Jacob.—Yes, that is what we reckoned working in the Andamans.

Dr. Matthai.—Is there anything peculiar in the Andamans to make the work slower?

Mr. Jacob.—Yes, in that tropical climate you have got to work your elephants for shorter hours.

President.—The Assam jungles are thick and difficult to negotiate, are they not?

Mr. Jacob.—I do not think they are more difficult than the Andamans. If anything, the Andamans are the more difficult.

Storage of match timber.

Dr. Matthai.—Coming back to the location of the Assam Match Factory, you were saying that it was rather difficult to raft the timber right up to the factory. I suppose the only alternative for them is to do all their extrac-

tion during the moosoon or at any rate to do all the rafting during the monsoon? That would mean a certain amount of storing at the factory end.

Mr. Jacob.—Yes.

Dr. Matthai.—If you take bombax and machilus how long do you think they would keep without deteriorating?

Mr. Jacob.—So long as the bombax is kept in water it will last for years: I don't know much about machilus.

Dr. Matthai.—If there is lack of water at the factory end, the storing would be difficult?

Mr. Jacob.—Although the water is cut off there is still water and they could easily bank it up when the water starts running down.

Dr. Matthai.—You don't think there would be any difficulty about storing the wood?

Mr. Jacob.—I don't think so.

President.—Our general impression was that if trees of any description were kept under water for three or four months they became unsuitable for match manufacture.

Mr. Jacob.—I was thinking more of the timber for 3-ply wood and wood for tea chests. I have really had not much experience about match making but if they want their timber as fresh as possible, I fancy there will be difficulty in rafting them down in any one time of the year.

The Assam Match Company's lease.

Dr. Matthai.—Originally these people had a monopoly for this reserve. Have you any idea why it is that they wanted a monopoly to start with? Was there any suggestion on the part of any other party to start a factory?

Mr. Jacob.—No. I think it was to prevent any rivals coming in.

Dr. Matthai.—And at the end of the year they thought better of it?

Mr. Jacob.—I think they were not getting sufficient timber.

President.—Was it entirely due to insufficient supply of timber or due also to the difficulty of extraction?

Mr. Jacob.—I think partly insufficient supply of timber inside the reserve. Outside the reserve and in the unclassified forests we cannot give any monopoly for the simple reason that the Deputy Commissioner might give the land away to the villagers. We have no control over the actual land.

President.—In the reserves the majority of the wood is hard wood, is it not?

Mr. Jacob.—Yes.

Dr. Matthai.—When you give a lease of that kind, you give them rights over the soft wood in the reserve. It is not a question of clear felling?

Mr. Jacob.—No.

Dr. Matthai.—When it comes to the actual felling, your officers mark the trees, do they?

Mr. Jacob.—As far as I can remember the company was allowed to mark the trees themselves.

President.—Did they extract the hard timber also?

Mr. Jacob.—No.

Departmental working of the forests.

Dr. Matthai.—Generally in your forests, the reserves would be divided into coupes, wouldn't they? How exactly is the system worked here? I gather that the system in other provinces is somewhat like this: You have the reserves and reserves are divided into coupes. If I have a lease for the reserve, when it comes to felling what happens is that I take a few compartments in each coupe and fell the trees in one year and then go round to other coupes in each succeeding year and thus work the whole thing on a rotation system. I should like to get some idea as to what you do.

Mr. Jacob.—That is how we are working the sal forests in the Goalpara division, but in other parts, at present we have just started a system under which a block is leased out to a contractor and he has to pay a minimum royalty a year for so many years, say Rs. 2,000 a year for five years. That is worked out on what we estimate is the material to be removed. If in three years he has worked out, say, Rs. 10,000, the lease lapses. In order to keep the blocks to himself he has to pay Rs. 2,000 a year for five years whether he works it or not. If he removes timber in three or four years up to the total royalty to be paid and thus finishes it in that period, his lease then lapses.

President.—Up to the present you have had no system of rotation?

Mr. Jacob.—No. We have not gone in for it. A large proportion of our forests is ever green and we have not even touched the fringe of it.

President.—So that it is not necessary to arrange for natural regeneration?

Mr. Jacob.—We are just starting working plans.

President.—Up to the present you have really not gone into it in any great detail?

Mr. Jacob.—No. The demand is just starting in the ever green forests very largely for sleepers. There is a demand for the supply of a minimum of 2 lakhs to the Assam Bengal Railway. In Kachar and Sylhet the demand is increasing enormously.

Dr. Matthai.—Rs. 2 a ton under the ordinary permit system, is the average royalty charged in Assam or is that only for soft trees?

Mr. Jacob.—I am not quite sure.

Dr. Matthai.—I don't want exact figures.

Mr. Jacob.—The trees are now classified into about four or five classes. The rates are not the same right through the province; they vary in different districts and the rates in the reserves also vary from those in the unclassified forests.

Dr. Matthai.—What are your most valuable trees in Assam?

Mr. Jacob.—Sal in the lower Assam and hollock in the Upper Assam.

Dr. Matthai.—What royalty would you charge for sal?

Mr. Jacob.—There is no fixed royalty. All our coupes are sold by auction. The rates vary according to the number and size of trees.

(NOTE.—There is a fixed royalty in unclassified forests; but this only applies to sales of a few trees, not in large quantities).

Dr. Matthai.—Have you any idea, when you put these things up to auction, what kind of return you get on the average?

Mr. Jacob.—I think it works out to about a rupee a c.ft. standing, but it is very difficult to say because a lot of poor stuff comes in, and if you take them into account probably they are worth very little, and you do not know how much is being realized for good trees. Perhaps Rs. 1-4-0 per c.ft. will be the average.

Dr. Matthai.—Rs. 1-4-0 I suppose would be a fair average?

Mr. Jacob.—I would have to get last years' sales at Goalpara to see how much it worked.

President.—Have you any teak in Assam?

Mr. Jacob.—Yes. We have one teak plantation—30 miles from Gauhati.

President.—How much does that fetch?

Mr. Jacob.—Very little. We use it departmentally. It was started about 1867 and went on till about 1880. The plantation is about 50 years' old. Up to the present we have not been able to sell the teak at all. We use it departmentally.

Lease conditions.

Dr. Matthai.—When you give a lease of this kind, apart from the usual forest rules, do you insist on special conditions; for example, would you specify the minimum girth that could be cut down?

Mr. Jacob.—Yes.

Dr. Matthai.—In this lease that you gave to the Assam Match Company was there any condition of that kind?

Mr. Jacob.—I think it was 2' or 2'-6". I think that was the minimum specified.

Dr. Matthai.—Do you have any definite condition as to the minimum quantity to be extracted in any particular year?

Mr. Jacob.—We usually do.

Dr. Matthai.—When a party asks for a lease over an area I expect he gets some rough idea himself of the amount of wood in that area?

Mr. Jacob.—I think sometimes he doesn't.

Dr. Matthai.—When a man, for example, pays to the extent of, say, Rs. 2,000 for a monopoly I think as a business man he would first of all try to make an estimate of the wood available.

Mr. Jacob.—I don't think in this case the Assam Match Company people did that. In this instance they took it merely on hearsay. I was not here when the lease was made, but looking through the file I gathered that they went purely on hearsay.

President.—You never heard that they sent a forest man of their own to make any survey at all?

Mr. Jacob.—I have not heard anything of that kind.

Dr. Matthai.—Have you had no enumeration survey of the trees in the forests here?

Mr. Jacob.—Only sal and we are now beginning to do enumeration further up in Assam.

Dr. Matthai.—What about hollock?

Mr. Jacob.—That is in a mixed forest, but we are beginning to do it.

Dr. Matthai.—Would it be very difficult to do it with regard to bombax?

Mr. Jacob.—Yes, for the simple reason that most of it is outside the reserves.

Dr. Matthai.—It comes to this, that the party himself will have to do what enumeration he can? The Forest Department won't be able to help him?

Mr. Jacob.—That is so. We have not at present got the staff to do it.

President.—On the outturn of the Assam Match Company it would appear that they would require 1,500 tons and something like 3,000 tons if they were working up to their full capacity. Would there be any difficulty in getting that quantity for the next 20 years?

Mr. Jacob.—Not the slightest difficulty.

President.—At what price do you think they could land their wood at the factory?

Mr. Jacob.—I should say they ought to get it at Rs. 18 to 20 a ton.

Transport to Calcutta.

President.—What about the transport to Calcutta? Would it be possible to transport any of this wood to Calcutta?

Mr. Jacob.—Do you mean in the log?

President.—Yes.

Mr. Jacob.—I rather doubt it.

President.—By river for instance?

Mr. Jacob.—If you raft it down you have got the whole of the Sundarbans to work through before getting it to Calcutta. You will have to go up stream in some cases and there is not much current there.

President.—The Western India Match Company told us that they had intended to take it to Calcutta and they gave it up. I wanted to know whether there was any particular reason for that.

Mr. Jacob.—I think it is difficult to get rafts across the Sundarbans.

President.—Would it be possible to take the wood by rail?

Mr. Jacob.—Yes, but the cost would be very heavy—8 annas a c.ft. or about Rs. 25 a ton. I don't know exactly what the railway freight is for light wood. The rate I am taking is for sal. These woods are only half as much in weight as sal.

President.—But they occupy more space?

Mr. Jacob.—Yes.—But I think there is a slightly lower rate for soft wood. The rate for sal is slightly higher, but how much I do not know.

President.—So far as you know has any attempt been made to take any of the soft wood down to Calcutta?

Mr. Jacob.—I do not know.

Dr. Matthai.—Are there any other uses for bombax and machilus apart from the manufacture of matches?

Mr. Jacob.—Bombax is used for 3-ply, for general manufacture and a fair amount of plank was being sent to Calcutta. It is also used for cheap dug outs.

Dr. Matthai.—What about machilus?

Mr. Jacob.—As far as I know it is not used.

Plantation of Bombax.

Dr. Matthai.—If there is a future for bombax in the ply wood industry in Assam and also the match industry, the question of the plantation of bombax might assume rather an important aspect?

Mr. Jacob.—We did some planting of bombax sometime ago in the frontier tracts.

Dr. Matthai.—Was it a very successful experiment?

Mr. Jacob.—It was very successful. It was done in this way. In certain parts in the frontier tracts the political officer, Sadiya, issued orders that the Miris must put down these trees in their land under our supervision in between their cultivation. They were paid at the rate of Rs. 4 a hundred—I am speaking from memory, but I think I am right—for plants 8' high in the second cold weather. It was worked out in this way: they pay a hut tax of Rs. 3: 75 trees were planted per acre so that what it really meant was, that they got the hut tax remitted by us provided they did the planting.

President.—We are told in Burma that unless they got 80 per cent. successful they paid nothing at all. Supposing they did not get good results here, what would you do?

Mr. Jacob.—We do the same I think.

President.—Your system is practically the same as that in Burma.

Mr. Jacob.—Yes. It is a certain percentage and in addition we gave them first class trees, hollock for example, for dug outs, to encourage them.

President.—How many acres was it?

Mr. Jacob.—As far as I can remember 4,000 acres.

Dr. Matthai.—In how many years?

Mr. Jacob.—In 7 or 8 years.

President.—How long ago?

Mr. Jacob.—I was in charge of it up to 1918. We can only do it up there, because elsewhere there is no means of compelling them, but in the frontier tract the political officer can issue orders.

President.—Have you any shifting cultivation in other parts of Assam?

Mr. Jacob.—Yes, all over Assam.

President.—Then there would be no difficulty?

Mr. Jacob.—There is such an enormous amount of land outside the reserves that you cannot manage it.

President.—Was this plantation done with reference to the match industry or was it with reference to the tea chest industry?

Mr. Jacob.—Tea chest industry.

President.—How far away was that from the tea chest factories?

Mr. Jacob.—Where they have put the factories is just about the bottom of where we did the plantation. We did a little below Murkong Seek and most of it is up.

President.—So that it is within easy reach of these factories?

Mr. Jacob.—Yes. It will be about 1940 when the trees begin to mature.

Dr. Matthai.—Do you think we should be able to get sufficient official information about the financial aspect of that plantation to form some idea how far it would be worth while to form a plantation? Is there any official record about it?

Mr. Jacob.—We could easily find out what the amount paid each year was.

President.—Could you give us a note on it—of the success of the experiment, whether there was any unusual disease which appeared among the trees and so on?

Mr. Jacob.—Yes.

Dr. Matthai.—On what sort of land was this actual plantation done?

Mr. Jacob.—It was unclassified land.

Dr. Matthai.—When you start a plantation on unclassified land it would be rather expensive, would it not? because there would be the question of land acquisition?

Mr. Jacob.—It is all Government property.

President.—Land acquisition in this sense that the villagers have a right to use the forest in a particular way and if you are going to use the land exclusively for the plantation of simal trees you have got to compensate the villagers for that right.

Mr. Jacob.—There are heaps and heaps of forests.....

President.—So that the question of compensation does not arise.

Mr. Jacob.—No.

Concessions to persons of foreign nationality.

President.—On this question, whether any restrictions have been imposed on the grant of concession to applicants of foreign nationality you say: "No restrictions were imposed in the case of the company now working. Such restrictions are imposed in all mining concessions and it is open to Government to impose such restrictions in the case of other enterprises. Such restrictions would take the form of requiring the company to be controlled by British subjects." Would not there be some difficulty in enforcing any such restriction? How would you ascertain that the Company is being controlled by British subjects exactly?

Mr. Jacob.—It is much more a question for Government. If a foreigner applies for a concession I would simply refer the matter to Government.

President.—Supposing a British subject applied but the concession was really worked in the interest of a foreigner or a foreign company, it would be almost impossible for you to find that out?

Mr. Jacob.—I quite agree. I think it would be impossible to check that.

President.—Have you any idea as to whether there would be any practical method of imposing restrictions on the use of forests by persons of foreign nationality?

Mr. Jacob.—It would be possible if Government were to make the person declare where the capital is coming from, but they will have to take his word for it.

President.—Without a very elaborate system it would be very difficult to impose such a condition, would it not?

Mr. Jacob.—Yes.

Total supply of available match wood.

President.—You said in answer to Dr. Matthai that you cannot give any estimate of the total available supply of match wood in the province?

Mr. Jacob.—No, I really could not give you any figure with any accuracy.

President.—In Burma we could not get any estimate but we were able to get a rough idea of the amount which would be available from certain blocks which were accessible from Rangoon. Would it not be possible for you to give us any idea as regards Dhubri?

Mr. Jacob.—I could not give you any figures with any accuracy.

Dr. Matthai.—What they did in Burma was this: they had enumeration in small typical areas and then they estimated on the data that the distribution of soft wood in the particular reserve was about '3 per acre. I do not know if you have any general estimate of that kind which you have formed.

Mr. Jacob.—It would be possible to work out taking simply the length of various rivers where we know the simul grows, allowing, say, one mile strip and then working out from that what is likely to be the total. But personally I don't think the figures would be accurate.

President.—The position seems to be this. As far as the present factory is concerned, there is an ample supply

Mr. Jacob.—Yes.

President.—As regards other factories you cannot at present say whether supplies would be available or not?

Mr. Jacob.—No.

President.—In any case it is doubtful whether the export of match wood from Assam would be an economic proposition.

Mr. Jacob.—Do you mean export of matchwood in the log?

President.—Yes.

Mr. Jacob.—My own opinion is that it would not.

President.—If you export in the form of splints there are other difficulties.

Mr. Jacob.—Yes. I do not quite know what the economical cost of delivery of timber at a factory is. The Manager of the Assam Match Company at Dhubri told me in January last that he was given figures from Bombay that it cost them Rs. 25 a ton. In Lahore when I was there year before last at the opening of the match factory there, they said they wanted to get it at Rs. 18.

President.—As a matter of fact our general impression was that in Burma they got it at Rs. 40 a ton and that it would be an economic proposition to get it in Calcutta at Rs. 60.

Mr. Jacob.—At that rate I should say it would be possible. I was taking it at Rs. 25, and at Rs. 50 I should say it would be possible to get the timber down.

President.—But then you could not give us any estimate of the quantity?

Mr. Jacob.—I am afraid I cannot.

Forest Department, Bombay.

A.—WRITTEN

- (1) Letter, dated the 6th September 1927, from the Tariff Board, to the Chief Conservator of Forests, Poona.

I am directed by the Tariff Board to say that, if possible, the Board would be very glad if you could please supply it with the following information, for use in the Match enquiry, relating to the sales advertised in the attached cutting from the *Times of India*:—

- (1) The distance from Bombay of the various blocks in question.
- (2) The varieties of match timbers to be sold.
- (3) The quantities of these varieties estimated to be in the blocks.
- (4) The prices realized at the auctions.

- (2) Copy of letter No. 2962 of 1927-28, dated 28th/29th September 1927, from the Conservator of Forests, C. C., to the Chief Conservator of Forests, Bombay Presidency, Poona, forwarded with No. 2800 of 1927-28, dated the 4th October 1927, from the Chief Conservator of Forests, Poona, to the Secretary, Tariff Board.

Subject:—Contract of softwood for Match Industry.

With reference to your endorsement No. 2500, dated 15th instant, I have the honour to supply the information *seriatim* asked for by the Secretary, Tariff Board, Calcutta:—

(1) Blocks—	Distance.
III, V and XI—Pen	15 miles away from Khopoli Railway Station (on a branch line from Karjat, G. I. P. Ry.), 71 miles from Bombay.
II and XII—Pen	5 miles away from the Bunder on the Dharamtar creek (direct communication by sea from Bombay), 27 miles from Bombay.
I, II and III—Khalapur	8 miles away from Karjat Station (G. I. P. Ry.) on the railway line from Bombay to Poona, 62 miles from Bombay.

(2) Soft wood—	Scientific name.
1. Savar	Bombax Malabaricum.
2. Kakad	Garuga pinnata.
3. Modul	Odina wodier.
4. Maharuk	Ailanthus excelsa.
5. Ambada	Spondias magnifera.
6. Tapshi or Wawala . .	Holoptelia integrifolia.
7. Bhorsal	Hymenodictyon excelsum.
8. Ran Bhendi	Kydia calycina.
9. Petari	Trewia nudiflora.

Hard wood—

10. Mango Mangifera indica.

(3) The material available for cutting may be estimated to be about 1,800 tons of softwoods, chiefly of *Bombax Malabaricum* and about 300 tons of Mango wood.

(4) There were no auction sales before. But in the last contracts with the Western India Match Company, the rates fixed were as under:—

Re. 1 per cartload of logs of softwood.

Rs. 4 per ton of converted softwood.

Rs. 4 per cartload of Mango logs.

Rs. 12 per ton of Mango planks.

NOTE.—4 cartloads of logs are roughly taken to be equal to 1 ton of fashioned wood.

(3) Letter No. 4451 of 1927-28, Poona, dated 20th December 1927.

I have the honour to append herewith a list of species (with local and English names) reported to have been extracted from the Bombay forests by some Match Manufacturing Companies and utilised in the manufacture of splints, boxes or cases.

Enclosure.

LIST OF SPECIES.

Generic and specific names.	Local and English names.
(1) <i>Ailanthus malabarica</i> .	Dhup (K).
(2) <i>Albizzia Stipulata</i> .	Udul (M), Kal-baghi (K).
(3) <i>Alstonia Scholaria</i> .	Mudhol (K).
(4) <i>Bombax malabaricum</i> .	Sawar (G), Sayar (E), Savri (K).
(5) <i>Bombax insipna</i> .	
(6) <i>Boswellia serrata</i> .	Salasi (H), Chitta (K).
(7) <i>Cinnamomun spp.</i>	Cinnamon app (E).
(8) <i>Elasocarpus Genitrus</i> .	Rudrakah (H & M).
(9) <i>Garaga pinnata</i> .	Kakad (M), Halabalagi (M).
(10) <i>Holoptelea integrifolia</i> .	Wawali (M), Nas bija (K), Tupshi.
(11) <i>Hymenodictyien excelsum</i> .	Bondur (G), Bhourcal (M).
(12) <i>Kydia calycina</i> .	Ran-bhendi (M), Bhendi (K).
(13) <i>Lophopstalum wightianum</i> .	Balpale (K).
(14) <i>Machilus macrantha</i> .	Gulum (M), Kurma (K).
(15) <i>Mangifera indica</i> .	Amba (K), Kavana (K) and Mango (E).
(16) <i>Malia dubia</i> .	
(17) <i>Nyctistica species</i> .	Nutmeg (E), Myristica malabarica Kanagi (K).
(18) <i>Odina wodier</i> .	Modul Shemat (M), Gojal (K).
(19) <i>Spendias mangifera</i> .	Ambada (E), Amate (K).
(20) <i>Spendias acuminata</i> .	Ambut or Ambada (M), Kodamba (K).
(21) <i>Symplocos Beddomei</i> .	Lod or Lodhra (M).
(22) <i>Trevis nudiflora</i> .	Pitari (K), Kat kumbra (K).
(23) <i>Buchanania latifolia</i> .	Char, Cheri (M).
(24) <i>Dysoxylum bineatariferum</i> .	Yerindi (K).
(25) <i>Koligarna Arnottiana</i> .	Sudrabilo (M), Holigar, Kootigeri (K).

<i>Generic and specific names.</i>	<i>Local and English names.</i>
(26) <i>Diospyros Paniculata.</i>	Kurikoomar (K).
(27) <i>Erythrina Suberosa.</i>	Pangara (K).
(28) <i>Erythrina indica.</i>	Ponarvo (G), Pangara (M), Mullu Matala (K).
(29) <i>Fig app.</i>	
(30) <i>Sterculia Foetida.</i>	
(31) <i>Tetrameles nudiflora.</i>	Ugado (M), Bolur, Jermalu (K).
(32) <i>Populus luphratica.</i>	(In Sind) Bohau (S).

Explanation of abbreviations.

(E) stands for "English".	(K) stands for "Kanarese".
(G) stands for "Gujarathi".	(M) stands for "Marathi".
(H) stands for "Hindustani".	(S) stands for "Sindhi".



FOREST DEPARTMENT, BOMBAY.

B.—ORAL.

**Evidence of Mr. E. M. HODGSON, Chief Conservator of Forests,
Bombay Presidency, Recorded at Bombay on
Monday, the 12th December, 1927.**

Introductory.

President.—Mr. Hodgson, you are Chief Conservator of Forests, Bombay?

Mr. Hodgson.—Yes.

President.—How long have you been holding this appointment.

Mr. Hodgson.—Since 23rd April last.

President.—And before that were you Conservator?

Mr. Hodgson.—I have been Conservator of Forests since about 1920.

President.—You have experience practically of the whole Presidency?

Mr. Hodgson.—Yes, except Sind.

President.—How many forest divisions have you got here?

Mr. Hodgson.—We have 23 divisions, including Working Plans.

President.—What is the total forest area?

Mr. Hodgson.—15,000 square miles for the whole Presidency.

President.—Does that exclude Sind?

Mr. Hodgson.—It includes Sind which has a forest area of about 1,100 square miles.

President.—What is the Government revenue out of the forests here?

Mr. Hodgson.—Rs. 75,20,117 (average for last 3 years).

President.—That is gross?

Mr. Hodgson.—Yes.

President.—Have you any idea what the nett revenue may be?

Mr. Hodgson.—Rs. 32,81,163 (average for last 3 years).

Research work.

President.—I want just to get an idea whether any forest research in the matter of matchwood would give you any return which would compare favourably with your total revenue, that is to say whether it would be a profitable proposition for the Forest department to undertake research on a large scale for matchwood.

Mr. Hodgson.—We forest officers have all been in favour of forest research work. At present we have none. Lately we came to the conclusion that we needed one officer for several things, a superintendent of working plans and silvicultural research, utilization and so on.

President.—What sort of trees have you got?

Mr. Hodgson.—Teak is our main revenue producer and we also get a good deal from hard woods. Soft woods are not generally cut.

Mr. Mathias.—Exactly what officers have you got?

Mr. Hodgson.—A Chief Conservator, four Conservators and a number of divisional and sub-divisional officers. We have no research officer nor utilization officer, nor any superintendent of working plans.

Mr. Mathias.—It is only in the course of the last five or six years that these proposals have been put up?

Mr. Hodgson.—Yes, but they have been negatived. The last negative order was received last month.

President.—On what system do you work here: how do you dispose of your forest produce?

Mr. Hodgson.—Each Conservator has to see to the sale of the materials in his circle.

Sale of standing trees by auction.

President.—How does the sale take place?

Mr. Hodgson.—By tender or by auction.

President.—Is there any departmental extraction?

Mr. Hodgson.—There is in out of the way jungles like the Dangs and parts of Kanara. We avoid that as much as possible because it means extra establishment. Wherever possible we always sell trees standing.

Mr. Mathias.—Do you undertake any clear felling?

Mr. Hodgson.—Yes. 10 years ago very little plantation work was done. Now a tremendous lot is done in teak, casuarina and babul.

President.—Babul bark is also used for training, is it not?

Mr. Hodgson.—Yes, but the babul wood is almost entirely used for fuel. Casuarina is also used for fuel.

Mr. Mathias.—When you have to determine what is a profitable rotation for certain particular kinds of trees, is that entrusted to your Divisional forest officers?

Mr. Hodgson.—That is entrusted to the working plans officer who is again subject to the control of the Conservator, and he also consults the Divisional forest officer.

Mr. Mathias.—But surely your Working plans officer, who has got other duties, would find it difficult to undertake this work because that would mean some sort of investigation of the market and so on?

Mr. Hodgson.—Yes, and also the rate of growth.

President.—How much revenue does Government get out of teak?

Mr. Hodgson.—I can't tell you because the revenue for teak is mixed up with revenue for other kinds of jungle wood. Supposing we sell on a clear-cutting system, we give a man, say, 50 acres, he gives us a lump sum for all the teak wood and all the jungle wood in it and we have no means of saying how much he gave for the teak and how much he gave for the jungle wood.

President.—Don't you enumerate the trees?

Mr. Hodgson.—No.

President.—Don't you undertake any enumeration of your forest areas?

Mr. Hodgson.—Practically none except that in the past they did some enumerations in the high forests to see what percentage of teak they had, and they did not pay much attention to the jungle-woods especially soft woods.

President.—How would Government know whether it was getting good money for what it was selling unless it knew how much teak-wood the forest contained or how much jungle-wood?

Mr. Hodgson.—We sell to the highest bidder.

Mr. Mathias.—Your working plans contain some estimate of the proportion of teak and other wood in the various divisions?

Mr. Hodgson.—A few test plots are taken to find that out.

President.—It must very largely depend upon the judgment of the purchaser?

Mr. Hodgson.—It does. He goes round and decides that a coupé contains a lot of teak-wood and he bids for it or quotes for it. We are entirely in the hands of the purchaser for any materials sold standing. I think we get a good price that way too. We avoid departmental work as far as we can because that means a lot of trouble and a lot of work. We have just closed down one saw mill, because we are getting a better revenue by selling trees standing.

Mr. Mathias.—Occasionally I suppose you revise the tenders?

Mr. Hodgson.—We do and even on occasions we say we won't accept a tender and we work a coupé departmentally.

Mr. Mathias.—That must be to some extent guess work?

Mr. Hodgson.—Not entirely. We have got the sales of the previous years to go on and the coupés are all about the same size. Supposing we expect to get Rs. 5,000 for each coupé and we are offered, say Rs. 2,000 for a coupé, then we say we will spend some money and work it departmentally. We have actually done that in one case this year.

Mr. Mathias.—You reject tenders when the difference is very marked.

Mr. Hodgson.—Yes. We don't do that much because it means a lot of work for our existing establishment which is the minimum that we want for protective work which is our chief business, that is protecting the forest from being destroyed. In the case of enumerations such as have been made, what we call inferior species like Bombax would not have been put down separately, but would have simply been lumped down as "other species." We have not got anything to show the proportion without actual surveys being undertaken on a larger scale.

Mr. Mathias.—Do you remember the statement you sent to us with the Government note, where you state the quantity of wood suitable for match manufacture? You give certain figures in the 3rd column about the annual outturn. Can we attach any value to the figures for practical purposes?

Mr. Hodgson.—Very little. As far as I can gather the Conservators found out from the divisional forest officers what they thought would be a reasonable amount to put down for each coupé. Of course we do know something about it because we used to destroy a lot of these soft woods when the coupé working was done. If the contractor did not cut them, we did because they interfered with the teak. Then assuming that one went over the whole forest in about 50 years, they gave figures for the areas within a fairly reasonably exploitable distance from the railways. Even then it is all very rough. I would not attach much importance to these figures.

Mr. Mathias.—Could we take it that these figures depend mainly on the local knowledge of the forest officers concerned?

Mr. Hodgson.—Yes, and I know this myself that they are very unreliable in places. I have a paper showing poplar as 17 tons to the acre in Sind. I think you might half that. In another case soft wood in north Khandesh is given as .06 of a ton per acre. I am sure it will be more than that. The explanation lies in the fact that they could not work out everything, but merely took the easier places.

President.—What it comes to is this, that at present at any rate the Forest Department are not in possession of any information upon which we can reasonably estimate the quantity of wood available?

Mr. Hodgson.—That is correct. What I think would be necessary is first of all to know which forest would be worked by match factories and then for enumerations to be made in these forests. That has not been done and we are very doubtful as to what forest you can use and you cannot use.

Dr. Mathias.—If a Match Manufacturers Association have brought to your notice the particular forest from which they desire to extract in the course of the next 12 or 15 years would Government be prepared to undertake the enumeration of these forests?

Mr. Hodgson.—Government would have to provide the money. It could be done undoubtedly and we could then after a year or so give fairly accurate figures.

Mr. Mathias.—Let us suppose an increased duty was imposed on aspen; that would raise the price of aspen and would naturally result in an increased demand and increased price for Indian wood. That would make it profitable for Government and then in that case if the tax was sufficient Government might undertake enumeration? It would of course be putting money into the local government's pockets.

Mr. Hodgson.—I don't know whether it would or would not. I doubt whether it would at present rates. We are selling now Bombax at the lowest price at 4 annas a cart and taking two carts to a ton, that is 8 annas a ton, whereas we are getting anything up to Rs. 130 a ton for teak. With such an enormous difference I don't see how profits are going to come in.

Mr. Mathias.—Are you selling at 8 annas a ton?

Mr. Hodgson.—That is our lowest price. You may take the average at Rs. 1-8-0 because we are also selling at Rs. 3.

Mr. Mathias.—Is that low price the result of poor communications?

Mr. Hodgson.—Partly. One reason is that Government decided to give a concession to the Gujarat Ismal Match Factory and allowed them to extract wood from the Dangs at 4 annas a cart. I was Divisional Forest Officer there at that time, from 1900—1910, and I know that they were extracting the wood in those days at 8 annas a ton (counting 2 carts to 1 ton).

Mr. Mathias.—The Dangs are near the Panchmahals, are they?

Mr. Hodgson.—No, further south.

President.—More or less it is the same distance from Ahmedabad as from Bombay?

Mr. Hodgson.—About the same distance.

President.—And those areas have apparently been given to the Gujarat Islam Match works?

Mr. Hodgson.—They were given one range and not the whole Dangs. The rest was available for other people. They wanted to have the whole place but it was proved that they could not work the whole area and so they got a concession in one range.

President.—Even according to these figures, so far as the Bombay factories are concerned the only forests available are in the Kolaba and Thana districts?

Mr. Hodgson.—Those forests are near.

President.—These are the forests which you may consider reasonably near Bombay?

Mr. Hodgson.—Yes. There is another point which I want to bring to your notice if I may and that is that further east in Khandesh, and within 30 miles of the railway, there is a very large stock of *Boswellia serrata*; and of *Odina Wodier*. These grow profusely there and perhaps can be used for matchwood. You get forests on both sides of the Tapti valley railway. There is a very large area of this growth and our forests border on Indore forests where there is also a large amount of these woods.

Dr. Mathias.—How far is that from Bombay?

Mr. Hodgson.—About 225 miles by rail.

Mr. Mathias.—Is this salai used in the manufacture of matches?

Mr. Hodgson.—I have conflicting information about it. Some said it was good for splints and some said it was good for boxes and some objected to it altogether. So I do not know whether it is useful or not.

President.—In your opinion it is available in large quantities?

Mr. Hodgson.—Yes.

President.—I should be very glad if you could give me an estimate of what you think would be available.

Mr. Hodgson.—Would it be feasible to make veneers up there for splints and boxes and pay freight on them to Bombay? The freight is Rs. 3-8-0 or about that per ton to Bombay and people say that knocks the bottom out of the whole thing.

President.—That is not very much. But this question is rather premature because this is a point which we have got to consider, but I may say this much that at present practically no country in the world which manufactures matches has followed that system.

Mr. Hodgson.—It only occurred to me that you might save a lot on transport of chemicals and other things by making veneers or splints in the forest. Then again if there is a delay in getting logs to the factories they are liable to be attacked by insects. I have heard one objection to Salai and that is that about 25 per cent. of the logs have twisted fibre which cannot be used, and this is so. I have seen some of the stocks. You can see the twisted fibre quite clearly.

Mr. Mathias.—A factory in the forest and a finishing factory in Bombay would mean double packing of the matches. Take for example the splints. They will have to be packed in the forest and unpacked again here. Then again there would be double supervision and repair shops if you have double factories. There is also difficulty about labour in the forests.

Mr. Hodgson.—There are large quantities of this wood and we can do nothing with it. We tap the trees for gum but we don't get much gum out of it and I don't think it will come to anything substantial.

Mr. Mathias.—Ambernath is going as far as Khandwa for the extraction of salai?

Mr. Hodgson.—We are nearer than that.

Mr. Mathias.—So that really the freight should not be prohibitive once this area becomes known to the match manufacturer.

Mr. Hodgson.—It happens that in the same place where this salai grows there is a large quantity of *Odina woder* (shembat).

Mr. Mathias.—That also has been used by some of the manufacturers?

Mr. Hodgson.—For boxes. They have shown me boxes made out of that but not splints.

President.—Does that grow also in the same locality?

Mr. Hodgson.—Yes, and in fairly large quantities, but of course not so much as the other.

President.—What is the size of the forest where it grows? We want an approximate estimate of the annual quantity available.

Mr. Hodgson.—East Khandesh is estimated to have a stock of 645,775 tons of *Boswellia serrata*. This tree however is scattered all over the Satpuda mountains and East Khandesh Satpuda mountains cover 400 square miles of rugged country. Possibly 2,000 tons can be brought out annually, but the transportation would be expensive.

President.—What would be the cost of transport?

Mr. Hodgson.—It is about 30 miles from the railway. I don't know the freight.

President.—How much would that cost? First of all what do you estimate the Government royalty on that?

Mr. Hodgson.—I suppose that would be the same as has been charged on savar.

President.—That would be about Rs. 1-8-0 a ton.

Mr. Hodgson.—Yes. It would come under matchwood. We don't sell it for anything else. There is no demand for it.

President.—What would be the extraction charge and the charge for taking it to the rail head?

Mr. Hodgson.—Felling and fashioning will amount to about Rs. 4 per ton: collection Rs. 6 per ton and cartage Re. 1 to Rs. 1-8-0 per ton mile.

President.—That is to say for 30 miles cartage would be about Rs. 45?

Mr. Hodgson.—Yes. We sold some mango wood from Kolaba district to the Western India Match Company and our price was Rs. 4 per cart load and when they got it to their factory it cost them Rs. 50.

Mr. Mathias.—Are there roads in the forests?

Mr. Hodgson.—There are some metalled roads and there are some cart tracks. Nearly everywhere we have got cart tracks which are good enough for extraction.

President.—Can you float them?

Mr. Hodgson.—Floating can only be done in Kanara and one or two other places.

President.—Then there is the railway freight from the Tapti valley. How much is that?

Mr. Hodgson.—Rs. 3-8-0 to Rs. 3-9-0 per ton capacity of the wagon.

President.—That may mean a good deal more as a matter of fact.

Mr. Hodgson.—It does sometimes.

President.—Then there is the cartage from Bombay to the factories.

Mr. Hodgson.—Yes. I thought if you only brought down the veneers or splints and utilized them instead of having to export a lot of waste timber, it might be one way out of the difficulty. In east and west Khandesh there are three divisions where there is lots of salai and shembat but there is also a good deal of other woods, though I cannot give you the quantities. They have not been worked out.

President.—Has this quantity been worked out on any enumeration, or what?

Mr. Hodgson.—No. No estimate has been made. Odina wodier is found in large quantities in the north and west Khandesh divisions.

President.—Even so if it cost Rs. 40 to Rs. 50 per ton to bring it to Bombay it does not seem to me to be a very attractive proposition considering the amount of waste.

Mr. Hodgson.—No. We should be very pleased if anything could be done with this forest from the match-wood point of view, because we can do nothing with either of these woods.

Dr. Mathias.—I suppose the experience of match manufacturers is that salai is inferior to Bombax?

Mr. Hodgson.—I do not know. The Western India Match Company to whom we sent logs reported first that it was not useful for splints and that as regards boxes it was inclined to get discoloured and stained the matches too. Since then I visited the Western Indian Match factory and I was told that they were using it for splints, so that the information obtained from match factories or from conversations with match manufacturers is very conflicting.

Dr. Matthai.—We had a sort of tentative opinion given to us by the Dehra Dun people and they considered it rather poor for both splints and boxes.

Mr. Hodgson.—That may be due to the other reason I have given, namely twisted fibre.

Dr. Matthai.—That probably accounts for it.

Mr. Hodgson.—I don't think that the twisted fibre extends to more than a quarter of the trees. They rule out twisted trees altogether.

President.—I understand that extraction can only take place in the dry weather?

Mr. Hodgson.—That is a fact. Felling is done to some extent in the rains in some parts of the Presidency but not extraction.

President.—So that as a matter of fact they should be stocked for the whole year practically or for six months anyhow?

Mr. Hodgson.—Yes. Then there is the trouble which has been pointed out by the Western India Match Company, namely that the wood gets attacked by borers.

President.—We saw that ourselves when we visited their factory.

Mr. Hodgson.—They wrote and asked me if I could make any suggestion and I consulted Dehra Dun and they suggested storing under water or in a mixture of sawdust and salt or sawdust and creosote. Painting with copper sulphate has also been suggested. None of these was found satisfactory.

Mr. Mathias.—By this time have they found any remedy for borers?

Mr. Hodgson.—No. I don't know how they are going to get over that difficulty.

President.—Where do the insects get in?

Mr. Hodgson.—I don't know anything about these insects, but if you girdle the tree to death and keep it standing even then these soft woods are very soon attacked by insects and then if you bring them down to the depôts they will be attacked there too.

Mr. Mathias.—It is not peculiar to salai, is it?

Mr. Hodgson.—No; all these soft woods are liable to attack by insects.

Mr. Mathias.—Even some of the hard woods are sometimes attacked, are they not?

Mr. Hodgson.—They are, but not to the same extent and not so quickly.

President.—Is the pest like white ants?

Mr. Hodgson.—No, it is a beetle.

President.—In any case until the insect problem is solved it is a big difficulty.

Mr. Hodgson.—That is my point.

President.—Even supposing they could use that wood for splints, the insect problem is there.

Mr. Hodgson.—I do not know whether, apart from the insect attack, if you cut trees, say, in May and brought them out at the end of the rains, they would suit the match industry or whether they would say that the wood had gone dry.

President.—In the monsoon it would remain more or less wet in the log?

Mr. Hodgson.—It won't dry so quickly.

President.—How long does it take before the sap gets dry in the case of soft wood?

Mr. Hodgson.—I could not tell you that, but in the case of hard woods they do not get dry if properly seasoned for years.

President.—As regards these other forests, Thana and Kolaba districts, there is a very small supply available, is it not?

Mr. Hodgson.—Would you include mango as a suitable species?

President.—Mango has been tried and some people say it is fairly good.

Mr. Mathias.—Are there any restrictions about cutting mango and other fruit trees?

Mr. Hodgson.—There were, but we don't bother about them now. We have been selling mango to the Western India Match Company and lately instead of that company taking the contract several of the match companies combined together and took a contract for soft wood, including the Western India Match Company, at Rs. 1-8-0 a cart and for mango at Rs. 3-4-0. Formerly it was sold even at Rs. 4.

Mr. Mathias.—A cart is equal to half a ton?

Mr. Hodgson.—I should take it at half a ton. The truth is that carts vary in different districts. In some the carts don't even carry the weight.

Mr. Mathias.—Would there be any general objection to the wholesale clearing of mango trees?

Mr. Hodgson.—I don't think so. In the Kolaba district in some cases people asked me not to fell mango trees close to their houses because they wanted them for the fruit and also for shade. You can take mango as an exploitable wood in these districts, but there again we are up against another trouble. We took 150 acres and we thought of increasing the number of mango trees by sowing seeds. But unfortunately as soon as the first leaves came out they were eaten up by wild pig. We could not keep away the pig and I am afraid they will force us to plant in a nursery and then transplant later when they have the second leaves.

Mr. Mathias.—That would be more expensive?

Mr. Hodgson.—Yes.

President.—How long would the tree take to grow to a workable size in a forest.

Mr. Hodgson.—If you assume that you can get Bombax in 20 years—and really I have nothing to prove that you can—I should imagine that it takes about 40 years for mango to mature. Against that the match people seem rather to like it and we have gone in for it for another reason. Supposing match factories ceased working or got other supplies, we can use the mango for other purposes, namely for timber and fuel. If we grow a lot of Bombax we do not know any other use for it.

Mr. Mathias.—Is not the colour of mango very variable?

Mr. Hodgson.—They complained to me of that, that some of the wood was dark coloured.

Mr. Mathias.—What does that depend on?

Mr. Hodgson.—I do not know.

President.—Supposing you were to undertake plantations you have not really got the kind of tree that you would plant yet?

Mr. Hodgson.—We want to know from the Match industry what wood they want.

Mr. Mathias.—Have you seen the plantation of the Gujarat Islam Match Company?

Mr. Hodgson.—I have not. One of my colleagues, Mr. Marjoribanks, inspected it about a year ago, and he said that it was badly tended.

Plantations.

Mr. Mathias.—One suggestion made to us about planting was that when a contractor takes a block of forest he extracts, we will say, 2,000 trees for purposes of making matches, but he should be compelled to plant for every tree cut another tree in an area set apart. Do you know how long it is necessary supposing the tree was simul, to attend to it after it is planted?

Mr. Hodgson.—We look after teak for three, four or even five years at the most to protect them. Later on if it happens to be in mixed jungle we have to look after them from time to time because jungle woods overtop them, and after say 15 years we have to thin out the jungle wood species.

Mr. Mathias.—Supposing this duty of re-planting was imposed on contractors, I take it that would not reduce the expenditure of the forest department in the way of tending such plantation?

Mr. Hodgson.—No. I don't think that sort of arrangement would work out here at all.

Mr. Mathias.—There is some such arrangement I believe in Sweden.

Mr. Hodgson.—If you want to increase the amount of Bombax—assuming that Bombax is suitable—we could do it at the same time as we are increasing the number of teak. In a lot of the forests the method is clear cutting, everything is cut and the contractor removes the timber and the fuel, and the small stuff about the size of my wrist is left and we pile that up in patches of varying sizes and burn it, and put in teak seeds. We also in some places instead of growing teak grew Bombax. We tried that in the last monsoon. The reason for burning the ground is that you get a good big strong plant, anything up to 6 feet in one season, and it is clear of weeds and soon established, whereas if you don't burn you get a small plant and a lot of attention is necessary afterwards. We thought if we put in Bombax we would get a large plant too, but it was a disappointment because it grew only 2 to 3 inches high, whereas we tried other jungle wood species and got large plants. For instance we tried Shewani (*Gmelina arborea*) and we got a rate of growth of 1 foot a month for the first six months on burnt ground. The Bombax plant are still alive. If they last through the next hot weather they may establish themselves.

Dr. Matthai.—Have you tried to plant the area after completely clearing it?

Mr. Hodgson.—Yes. We tried Bombax two years ago in the Panchmahals and it was reported as a failure. The plants germinated and then died, we don't know why. We also tried a bit near Borivli and there also it was not successful. When it is decided what species we should go in for we shall have to study them for two or three years as to the best way of propagating them.

Mr. Mathias.—What price per ton would make it worth your while to undertake plantation say of simul?

Mr. Hodgson.—Without looking into figures, if the plantation was successful—and that is a big “if”—and supposing you could get 4 Bombax to 1 teak in your rotation, I should imagine that simul would only fetch about a fifth of the price of teak—we would have to get a much bigger price than we are getting now.

Mr. Mathias.—Now you are only getting 8 annas a ton?

Mr. Hodgson.—That is the minimum. We would have to get something to compete with teak selling at more than Rs. 100 a ton.

Dr. Matthai.—How exactly do you get labour in this plantation?

Mr. Hodgson.—We get local labour and in places like Kanara where the population is very sparse we may have to bring labour from outside.

Dr. Matthai.—It would be very expensive.

Mr. Hodgson.—Yes, but for teak it is worth it. In the case of teak we cut and burn the unsaleable jungle wood and put in teak. That runs up to anything like Rs. 100 an acre for establishing a plantation.

Mr. Mathias.—You have no tribes here who go in for shifting cultivation?

Mr. Hodgson.—We have but we don't encourage that, and it would not work in these forests (Thana, Kolaba, etc.) which are too valuable because full of teak. In the Dangs there used to be shifting cultivators but they have all settled down.

President.—Supposing you were to undertake a plantation, would it be possible for you to have it in the Kolaba district or the Thana district or anywhere near Bombay?

Mr. Hodgson.—In the Kolaba district we can easily increase the number of mango if it does not prove too expensive. I suggest mango because it seems to be popular with match factories and it is also popular with the Forest Department. In the Thana district we could put in a certain amount of Bombax at a low cost. The contractor prepares the rab beds and we put in the seeds. That would be about the cheapest we could do.

President.—In your note you say “For Kolaba a scheme has been laid down to plant an area of 5,000 acres in 40 years”.

Mr. Hodgson.—Yes. We started on that last rains with 150 acres, but it failed unfortunately because the pig ate up the plants. That was the place where we sowed mango.

President.—Is there any clear felling round about here where you can undertake plantations?

Mr. Hodgson.—Yes. The system is clear felling but, the trouble is that all the teak comes up from the stumps of the old fellings. Once we establish a teak we get it virtually for ever.

President.—In a plantation, supposing you undertake it, how many tons could you get in a year, say, on a 40 years rotation for mango?

Mr. Hodgson.—I could not tell you that.

President.—In one acre how much would there be?

Mr. Hodgson.—We have not got any forest of this. We have got forests where the trees are scattered.

President.—Supposing you were to plant it?

Mr. Hodgson.—Hitherto we have not done any mango planting at all except in a compound.

President.—Would it be feasible? Supposing you undertake plantation, would it be feasible to have only one kind of tree or would you require other kinds of trees also to grow there?

Mr. Hodgson.—It would be very unwise to have only one kind of tree. Very likely you will have insect or other trouble. These other soft wood species that we have been talking about, e.g., salai and Bombax, are what they call light demanders; they don't protect the soil; the soil suffers and the trees don't thrive then. They are better grown with other trees, particularly so in the case of teak. We cannot propagate as much teak as we would like to because we have to mix it with other trees.

Mr. Mathias.—As regards your system of felling, do you adopt the clear felling system only?

Mr. Hodgson.—No. But we do a good deal of it.

Mr. Mathias.—When you have a clear felling, do you have the roots extracted?

Mr. Hodgson.—No.

Mr. Mathias.—You get a certain amount of coppice?

Mr. Hodgson.—We get a great deal of coppice in these forests round about Thana. We depend upon the coppice for a good deal of the next crop and when we plant we make bonfires in the blanks where there are no trees and put in seed or plants.

Mr. Mathias.—In the clear felling you cut even the smallest trees, the idea being that when the next rotation comes all the trees will be of equal age.

Mr. Hodgson.—Yes. We have also a modified system. We have made a working plan lately for one forest in which we keep all trees up to 18" girth because we say it won't do any harm to the growth of the other trees if the contractor prefers not to cut them. They would give a little larger timber at the end of the rotation. As a general rule the forest is absolutely clear cut. The results are quite different in the two cases, i.e., where we have patches where coppice come up and in the other where we burn the whole plot and don't rely on coppice at all.

Mr. Mathias.—Where you have a clear felling system I suppose it is impossible to allow match manufacturers merely to extract from any particular coupé any particular kind of tree they want. They have to take the whole coupé.

Mr. Hodgson.—No. They need not take the whole coupé. First of all when the demand started we did our best to get these match people to deal directly with the contractors for the coupés and take the soft woods from them, but the contractors refused to take an interest in it owing to the low rates offered by the Match industry because they could not pay more than a certain rate. The next thing we did was that we grouped a number of these coupés together. We really took the whole series of 40 or even two series of 40 and said to the match companies "you can work out if you can in one year an area of 2,500, 3,000 or over"—some of these blocks went up to over 4,000—"independent of any coupé contractor". They went round and took the trees they like and they are doing that still. We have more than one tract being worked under that system and it does not interfere with other work.

Mr. Mathias.—Which do you think is the best system for the match manufacturers—to purchase trees from contractors or to extract the wood themselves?

Mr. Hodgson.—If you get a reasonable rate from the contractor then I think it saves you trouble, you get the wood delivered at the station. But that might not be enough. You might have to do the other as well. If you do the other you have this disadvantage, that you will have to take a large block of forest and work on a 20 year felling cycle over a large area.

Mr. Mathias.—If we adopted a measure which would increase the price of match wood without decreasing the profits of the manufacturer, then it would pay contractors to take up this business, would it not?

Mr. Hodgson.—But the main trouble for match wood is transport, the price is a fleabite.

President.—Are there fairly good communications in Thana and Kolaba districts?

Mr. Hodgson.—Yes, we have a net work of cart tracks joining up the metal roads. There is no trouble about that.

President.—Where is this area of 5,000 acres in the Kolaba district?

Mr. Hodgson.—It is near the railway line.

President.—Which is the nearest railway station?

Mr. Hodgson.—Karjat.

President.—The Kolaba district runs along the coast, does it not?

Mr. Hodgson.—Yes. There is also a railway going to be made from **Mum-bra** to Mahad. The communications are going to be improved very much.

President.—How far will they have to go from the forest to the railhead?

Mr. Hodgson.—There is another little railway line which runs from **Kar-jat** to **Khopoli**. They use that railway a lot. You get a lot of timber within five miles of the railway.

President.—This plantation of 5,000 acres is it within five miles of the railway?

Mr. Hodgson.—Yes. There is another station called **Palasdhari**. This area is within a mile and a half of that station.

President.—As regards communications this area is not badly situated?

Mr. Hodgson.—It is not. Another thing in the Kolaba district is that there are rivers and these can be used. Boats go up the rivers and can be loaded.

President.—Then the cost of transport ought not to be very high.

Mr. Hodgson.—It is probably lower than other places, but still it is very high.

President.—What do you estimate the cost of transport to be?

Mr. Hodgson.—The match factory at **Ambarnath** is paying Rs. 4 for a cart load of mango logs. It costs them Rs. 50 altogether.

President.—The railway fare cannot be very much because from **Karjat** to **Ambarnath** is not a great distance. It must have been the labour.

Mr. Hodgson.—The labour rates are high. They are 50 per cent. more than they used to be.

President.—It is labour then that is responsible for the high cost. It cannot be the railway freight because the distance from **Karjat** to **Kalyan** won't be more than 40 miles.

Mr. Hodgson.—It is not. I don't think they send it that way either. They send it down by boat. They send it down by one river and up another river, or they send by railway.

Mr. Mathias.—The match factories at present get their wood at about Rs. 40 a ton. Where do they get these trees from? I understood that they extract from Kolaba and Thana?

Mr. Hodgson.—Yes. They also do it from the **Panch Mahals** and **Surat**.

Mr. Mathias.—But then you were saying that the railway freight was high?

Mr. Hodgson.—That is their complaint.

Mr. Mathias.—How do they manage to land it at their factory at that price? Do they buy through contractors?

Mr. Hodgson.—They buy from coupé contractors and also from us.

Mr. Mathias.—The places they get their wood from must be the most easily accessible ones?

Mr. Hodgson.—I am sure that when they take one of these areas, they work out the most easily situated trees and leave the others.

President.—But from the forest point of view I take it that these plantations can never be made very remunerative?

Mr. Hodgson.—I am afraid not.

President.—Even at Rs. 3 or Rs. 4 royalty you would find it uneconomical.

Mr. Hodgson.—I think it would be very difficult to compete with hard woods and particularly with teak. They have some lands where they don't grow teak in the Panch Mahals and we have been trying to grow Bombax on that and one plantation is in its third year, but is a failure. They germinated but the trees died. The idea was that we should stock all this land which is not suitable for teak with Bombax, but we never expected that once the trees germinated they would die later.

Mr. Mathias.—When we were at Ahmedabad the Sultan Match Factory owners were loud in their complaint that they could not get any wood from the forest department. Could you throw any light on that?

Mr. Hodgson.—I can't. In one case we called for tenders for soft woods in the East Khandesh Division and there was not a single tender at all.

Mr. Mathias.—The complaint seemed rather curious because it is to the advantage of the forest department to dispose of these soft woods as far as possible.

Mr. Hodgson.—Certainly. This allegation won't stand at all. Another thing is this. There are cases of people taking a contract and not working out anything, so it is needful for us to tie them down to a minimum number of carts because all our trouble otherwise goes for nothing.

President.—Generally speaking what is the position from the forest point of view. Would you consider plantation a very good source of revenue?

Mr. Hodgson.—No, not even if it is successful.

President.—If you had to undertake it, you would not be able to sell any wood say under Rs. 3 or Rs. 4 a ton on an average as royalty?

Mr. Hodgson.—No, it would be 20 to 30 years before we can get it.

President.—At Rs. 3 or 4 it is very doubtful whether it would pay you because you don't have any data just now.

Mr. Hodgson.—No.

President.—Another difficulty is, you have to take a rotation of 20 to 25 years for Bombax and 40 years for mango.

Mr. Hodgson.—I am afraid you cannot get out of that.

President.—Supposing the requirements of this Presidency were 20,000 tons a year, you cannot tell us how many acres you would require each year?

Mr. Hodgson.—In those figures that Mr. Edie gave you he put the annual wood available as 10,000 tons from our forests.

President.—I am talking of a plantation, that is on a 40 years rotation. Say you require 20,000 tons a year. I suppose 15 to 20 tons an acre would be about the limit.

Mr. Hodgson.—I should say less than that.

President.—Let us say 10 tons, then it means you require for 20,000 tons about 2,000 acres a year.

Mr. Hodgson.—Yes, if successful.

President.—And that must go on for 40 years.

Mr. Hodgson.—Yes.

President.—Whereas you cannot do more than 150 acres a year under present conditions, can you?

Mr. Hodgson.—Yes. In the way I have suggested before we could do a little more by sowing some Bombax where Bombax will grow and some mango where that will grow along with the teak.

President.—I am talking of a plantation specially for match woods. Supposing you had to plant 2,000 acres a year, could you do it for this one purpose?

Mr. Hodgson.—I don't think so.

President.—How much do you sow in a year?

Mr. Hodgson.—In the whole Presidency we are sowing about 30,000 acres, but a very large part of that, about 11,000 acres, is in Sind and that is babul.

President.—I suppose it protects itself more or less?

Mr. Hodgson.—It does. Even cattle don't destroy these. It is simple work and it does not cost very much. Unfortunately we have got a huge area with a huge quantity of wood, which I suppose is suitable, in Khandesh, and you cannot make use of it. That seems an awful pity!

President.—Now as regards the actual quantities available in the forest your statement is not very encouraging. The total is 10,800 tons a year; of that 2,000 tons is in Sind and is really not very useful for these people here in Bombay.

Mr. Hodgson.—No. May I ask whether it is useful at all?

President.—We do not know that. I think this poplar has not been tried.

Mr. Mathias.—They experimented on it in Dehra Dun and they consider it fairly good.

Mr. Hodgson.—Would not 2,000 tons a year run a small factory there?

President.—We have got to consider whether these small factories can manufacture matches economically. I dare say 2,000 tons will suffice for a small factory but we are now considering the position of the match factories here in Bombay. What have you got for them? These three areas in the Kanara and Belgaum districts are not of very great use to the Bombay manufacturers. Then you have got the Dangs and the Panch Mahals which you have already given to the Gujrat Islam Match Factory, and in any case they are rather far from Bombay.

Mr. Hodgson.—Yes, they are.

President.—The Thana and Kolaba districts remain containing altogether 3,500 tons. As regards these we have not any reliable information.

Mr. Hodgson.—That is true.

President.—Then there is much talk about railway freights, but the railway freights from the railhead to the factories do not appear to be very high.

Mr. Hodgson.—The cartage and cooly rates are very high.

President.—They have complained that the railway freights are very high. It does not seem to me that 3 to 4 rupees railway freight is too high.

Mr. Hodgson.—Not compared with other costs.

President.—Then in these forests the main item I take it is the expense on labour?

Mr. Hodgson.—Yes, labour and cartage.

President.—What can Government do as regards these?

Mr. Hodgson.—We cannot do anything because they are settled by market rates. That affects our revenue too just the same way.

President.—On an average you calculate your cartage charge as one rupee a mile or what?

Mr. Hodgson.—It is Re. 1 to Rs. 1-8-0 per ton mile.

President.—But in the Kolaba district cartage would only be 5 or 10 rupees at the most if the forest is within 5 miles from the railhead and the rest of the charge must be for labour.

Mr. Hodgson.—Then of course you get some of the cuttings in near and easy places and some in difficult places. Trees have to be cut and dragged down to a road and loaded into a cart.

President.—How do they drag them down?

Mr. Hodgson.—Both by coolies and by buffaloes.

Mr. Mathias.—The cartage rates are very high in Bombay, are they not?

Mr. Hodgson.—They are, indeed.

Dr. Matthai.—I believe you could save cartage in Sind as regards *Populus euphratica* because it grows by the river side so that it is only a question of railway freight mainly, is it not?

Mr. Hodgson.—I presume you could float them down if you wanted to.

Dr. Matthai.—You have to raft them or what?

Mr. Hodgson.—Yes; they also use country boats.

Mr. Mathias.—Has this *Populus euphratica* been taken by any of the match factories?

Mr. Hodgson.—I don't think the Bombay factories have used it at all and I understand there is no match factory in Karachi, though there is, I believe, a small one at Bubak in Larkana District that uses this wood.

President.—What it comes to is this: as regards plantations the position is hopeless from the Government or from any other practical point of view.

Mr. Hodgson.—I am afraid it is.

President.—Then as regards the quantities actually available I think you are groping in the dark more or less.

Mr. Hodgson.—But mind information could be got given time and money.

President.—What sort of establishment would you require for that purpose?

Mr. Hodgson.—We simply want to strengthen our survey staff, and we have forest guards and people who are capable of doing that work. Then again we want money for substitutes, that is to say we take a man who is able to do this work off his job we must put in another man.

President.—Could you give us an estimate of what it would cost Government to undertake this enumeration work in the Thana, Kolaba and Khandesh districts?

Mr. Hodgson.—We require time to estimate that. We have to decide first of all what percentage of the areas you want us to examine and how thoroughly you want that to be done and that makes a big difference.

President.—We cannot tell you how thoroughly we want you to do that except that we would like to be satisfied whether the estimate could be relied upon.

Mr. Mathias.—I imagine if you undertake enumeration, you take a belt of a certain width which runs straight through the forest?

Mr. Hodgson.—We generally take one or two acres here and there. We do it not so much in belts as we do it per acre but of course you get the same results.

President.—To enumerate the whole area how many acres do you think you would have to undertake?

Mr. Hodgson.—I should be guided by what the match factories would agree to take the stuff from.

President.—You have given us these four areas, two in Khandesh.

Mr. Hodgson.—Assuming they are sufficiently near.

President.—That is for the forest authorities to find out. You cannot expect the match manufacturer to go into the forest and say that.

Mr. Hodgson.—We say we have got all these supplies of salai, odina wadier and so on and it is up to them to say whether they could use them or not.

President.—The point is, unless they can get the wood delivered at the factory at about 40 rupees a ton, it is hardly likely as far as our present information goes that they can use the wood. Then you have to calculate how much you would have to allow for freight from the railhead to the factory. You deduct that first and then what remains is yours. That is to say you undertake extraction and everything and you deliver at the railhead.

Mr. Hodgson.—We are to base this figure on the present prices.

President.—On the present prices of matches, present cost of labour and so on. You have to calculate how far you can go into the forest in order to bring the wood to the railhead. On that basis we should like you to give us an estimate as to the quantity that would be available in the forest. You

need not go into very inaccessible areas. Supposing we allow, say Rs. 15 for charges from the railhead to the factory, then it leaves you Rs. 25. For Rs. 25 a ton how far can you go into the forest? And your enumeration will be confined merely to that area. If you are to make an enumeration on that basis you must give an idea of the establishment you would require. If you can give us some approximate idea for these four areas, two in East Khandesh and two in Kolaba and Thana districts, it would be useful. It depends on whether the wood is available in large quantities.

Mr. Hodgson.—The trouble is about the distance.

President.—Kolaba and Thana districts are all right so far as distances are concerned. Take those only.

Mr. Hodgson.—I would be satisfied with two parties.

President.—You can take time to consider it. If you can let us have your estimates after a fortnight or so it will do for us.

Mr. Hodgson.—That would be better. How long would you give us to do the enumeration?

President.—You must say that.

Mr. Hodgson.—I could do it much quicker if I put on more parties.

Mr. Mathias.—You can take the time which would be reasonably economical and administratively convenient.

Mr. Hodgson.—We could do a good deal in the working season from 1st November to the 1st of June. That would give you a very fair idea if we do the work in the working season.

President.—Much has been said about Government not doing this, that and a thousand and other things and we want really to understand what the position is from the Government point of view. It is absolutely essential that the industry and Government should know what forest resources they have at their disposal for this purpose, and we therefore want a little more accurate information than what is contained in the statement already supplied to us.

Mr. Hodgson.—I could do a good deal for Rs. 500 a month for seven months.

President.—That is not a very big sum.

Mr. Hodgson.—It is not big. I could run a couple of parties on that more or less.

Mr. Mathias.—Has any proposal for enumeration been put up before Government here?

Mr. Hodgson.—None.

President.—You can give us a considered proposal. It would not break the back of Government if they were to spend Rs. 500 a month.

Mr. Hodgson.—I don't see how we are going to start before next season because as you know there is always delay when you bring up a proposal before Government!

President.—That is true. It does not matter if you are not able to start till next year. What we want to know is what would be the commitment of the local government if they were to undertake it.

Mr. Hodgson.—I will give you that.

President.—In one of these documents (Local Government's letter)—we do not know how far it is going to be kept confidential—any how there is no harm in referring to page 14 of it. It is stated that some of these factories have complained that Government have been practically destroying match wood. Is that correct?

Mr. Hodgson.—It is not correct. I have got papers about that with me here. Supposing we have two teak growing side by side and there is no room for both the one that is inferior is cut. In the same way if we get a teak growing alongside any other inferior species, and the inferior species is not useful, then it is cut. Then these match factory people seeing the soft wood cut complain that match wood is being destroyed. In the case of match wood

there being no demand for the timber it would be left lying there. We would only be too pleased if somebody were to take it away.

President.—This cutting is done merely in the interest of silviculture?

Mr. Hodgson.—Yes. Similarly if we are to grow Bombax we have to grow it closely at first, then we have to cut some to leave enough room for the remainder to mature. I think this complaint is due to the fact that these people do not understand silviculture. We used to destroy them by girdling removing all we could; now we are trying to get a sale for them.

Mr. Mathias.—I suppose you have consulted the match factories on the subject of their requirements?

Mr. Hodgson.—Yes. From time to time we send them logs to see what they have to say about them. There are some on their way now, but we have not got as much good out of that as we thought we would because we get very conflicting information.

President.—The information that you really require is this, namely, what kind of wood they consider suitable for their purposes, is it not?

Mr. Hodgson.—Yes.

President.—That information, I take it, you have not got?

Mr. Hodgson.—No. We want to be sure before we start growing particular kinds of wood.

President.—Your department has been in communication with the manufacturers for some time now?

Mr. Hodgson.—Yes. We send them all species which might be useful for match purposes. We cut a log or two and send them along. Different forest officers do that and I have done it myself.

President.—So far you have had no definite expression of opinion as to which species they consider suitable?

Mr. Hodgson.—No. I have been round and asked them but they have told me different things.

Mr. Mathias.—It would be of assistance to you if the Match Manufacturers Association on the Bombay side came to some definite conclusions and send them on to you as to the suitability of wood?

Mr. Hodgson.—Yes it would. I am sure I have not had the same opinion from the same people twice over. I am perfectly certain that the Ambarnath people said that they could not make splint out of salai and then they made them afterwards.

Dr. Matthai.—I suppose in regard to most of the woods the quality would vary according to the soil?

Mr. Hodgson.—I have had a complaint that the mango was not always of the same quality.

Dr. Matthai.—We had the same complaint about Bombax that in some cases it is rather lighter and in other cases it is darker.

Mr. Hodgson.—I cannot say from experience, but it is likely to be so, because we get a difference in the quality of the teak. The Dangs teak is looked upon as much stronger than that on the Bombay side. Then again there is a complaint about twisted fibre. The climate and the soil differ and they may affect the growth and quality of the wood, but we have not got any definite information about it.

President.—The colour is less important than the fibre, there is no question about that. In this long list you have given I think there are only four or five species which have been used by these factories?

Mr. Hodgson.—That is so. Would it be possible for you to let us know if it is out of the question to make splints in the Satpura range where we have this *Boswellia serrata* instead of sending the whole lot to Bombay. We are very keen on that because we have no use for this wood.

President.—It is very difficult because we don't form any opinion until we actually come down to write the report.

Mr. Hodgson.—It is a pity that where there is such a lot of wood it is of no use.

President.—It requires more intricate calculation than one would think to decide whether it would really be cheaper in the long run to manufacture splints in the forests.

Mr. Hodgson.—Not only in our forests but there are a lot of other forests in the Indian States where there are lots of similar jungle woods.

President.—If any factory were to undertake its own plantation would Government give it land at a reasonable rate?

Mr. Hodgson.—Honestly I don't think they could. There is very little land to give; certainly there is little or nothing outside the forests and I don't think it would be practical to give up forest land.

President.—I saw it suggested in one of the Government documents that it was the business of the match factories to have their own forests and now I wish to know how the factories are to have their own forests if there is no land available?

Mr. Hodgson.—One factory up in Ahmedabad has some land.

President.—It is only 125 acres; it is so small.

Mr. Hodgson.—Yes. I also saw one small area at Borivli and then I find that the Development department in Bombay wants it, and in all probability it will get this land for building purposes.

President.—Have you no waste land which Government can give for plantation purposes just as is done in Burma?

Mr. Hodgson.—There is some, but not much and I doubt if it is suitable for plantations.

Mr. Mathias.—Was that Government forest land on which the Islam Match Company have their plantation?

Mr. Hodgson.—No.

Dr. Matthai.—They told us that it was waste land.

Mr. Hodgson.—It was waste land probably. You can't take up private land because it costs too much.

President.—Then the factories simply cannot have their own forests?

Mr. Hodgson.—Honestly I don't see how they are going to have their own land. Our Minister talked about giving up a bit of land at Borivli but I don't think it is worth having. We tried to grow Bombax on it but it did not turn out successful; then there is the Development Department which wants it.

President.—You really cannot have a forest near a big city like Bombay and Borivli is not far enough to have a forest.

Mr. Borivli.—That is true.

President.—Then private plantation, I take it, is out of the question?

Mr. Hodgson.—I don't see how it is going to be done. It would have been easier to have done that a generation or two ago when land was more easy to get. We ourselves have the greatest difficulty in afforesting any area because the cost of land is so great, unless it happens to be waste land.

President.—What will be the price per acre on an average for private plantation, say in the Kolaba or Thana district?

Mr. Hodgson.—I could not tell you off-hand because it varies with the class of land enormously.

President.—Is Kolaba a rice growing district?

Mr. Hodgson.—Mostly rice growing.

President.—Then it would be more profitable to grow rice than to have a forest, would it not?

Mr. Hodgson.—Much more profitable, and we forest officers cannot retain or purchase such land at all because it won't pay us.

President.—And Government would not part with any forest land to a private concern; is that the position?

Mr. Hodgson.—I think it would be very difficult to get and it is problematical whether a private concern would be able to make it a success.

Forest Department, Bengal.

(1) *Letter from the Tariff Board, to the Conservator of Forests, Bengal, dated the 17th October 1927.*

I am directed by the Tariff Board to ask if you would kindly supply, for use in the enquiry now proceeding into the circumstances of the Match industry, any information you may have regarding—

- (1) The amount of *genwa* timber available in the Sunderban area for match-making factories situated in the vicinity of Calcutta or elsewhere.
- (2) The rate of growth of this tree.
- (3) The suitability for plantation, that is to say, whether it would be possible to establish plantations of this tree to feed the match factories.

(2) *Copy of letter No. 721/18-16, dated the 2nd November 1927, from the Divisional Forest Officer, Sundarbans Division, to the Conservator of Forests, Bengal.*

With reference to your No. 2684/1-T.-47, dated the 26th October 1927, I have the honour to state that it is not possible to give the amount of *Genwa* available in the Sundarbans until the enumeration for the Working Plan is finished.

2. Nothing is known yet regarding the rate of growth.

3. Natural regeneration is good and no artificial regeneration or plantations have been experimented with up to the present.

The export of *Genwa* timber during the last three years from the Sundarbans was as follows:—

	C. ft.
1924-25	70,50,412
1925-26	83,20,232
1926-27	96,82,443

Only a small portion of this was probably suitable for matches.

It is not at all certain whether we can keep to this volume of export in subsequent years.

No. 2850/1-T.-47.

BENGAL FOREST OFFICE.

Darjeeling, the 9th November 1927.

Copy forwarded to the Secretary, Tariff Board, for information with reference to his letter No. 800, dated the 17th October 1927.

(Sd.) J. WALKER,
for Offg. Conservator of Forests, Bengal.

FOREST DEPARTMENT, BIHAR AND ORISSA.

B.—ORAL.

Evidence of Mr. A. J. GIBSON, Conservator of Forests, recorded at Calcutta on Wednesday, the 15th February, 1928.

Introductory.

President.—Mr. Gibson, you are the Chief Conservator of Forests, Bihar and Orissa?

Mr. Gibson.—I am the Conservator of Forests, Bihar and Orissa.

Mr. Mathias.—There is no Chief Conservator there?

Mr. Gibson.—No.

President.—That is to say, you are the head of the department?

Mr. Gibson.—Yes.

President.—Is "Forests" a Transferred Subject there?

Mr. Gibson.—No. We work directly under the Governor in Council.

President.—Were you in the Punjab for some time?

Mr. Gibson.—Yes, for a long time.

President.—When did you leave it?

Mr. Gibson.—In 1925.

President.—Have you spent most of your service in the Punjab?

Mr. Gibson.—In the Punjab and in the United Provinces.

President.—So you know all the three Provinces?

Mr. Gibson.—Yes.

President.—I understand from one of the notes here that you paid a visit to Sweden.

Mr. Gibson.—I was deputed by the Punjab Government to go to Sweden to look into the question of the match industry and the pulp industry.

President.—When did you visit Sweden?

Mr. Gibson.—In 1921.

President.—Were you allowed to see any match factory there?

Mr. Gibson.—I failed to get inside any match factory.

President.—Did you try any other countries besides Sweden?

Mr. Gibson.—Quite recently I have returned from deputation to Australia and I have been in one of the very largest factories there, that is "Bryant and May's," with a daily output of 3,500 gross.

President.—That has been recently started?

Mr. Gibson.—Quite recently.

Mr. Mathias.—Do they use imported wood?

Mr. Gibson.—Yes, partly Finnish wood.

Mr. Mathias.—Do they use any local wood?

Mr. Gibson.—Yes.

Mr. Mathias.—What kind of wood?

Mr. Gibson.—Pine from Queensland.

President.—What does it correspond to here?

Mr. Gibson.—The blue pine in the Punjab, *Pinus excelsa*.

President.—Is it used on any large scale there?

Mr. Gibson.—They use that wood but the quantity is limited. There is one feature of the Australian match trade which is unique and that is that

the inside boxes are made of pulp, not wood at all. I have got a box here (shown).

President.—Are the sides made of pulp too?

Mr. Gibson.—Yes. That would be a very interesting development in India, if you could make inner boxes out of pulp.

President.—What is this pulp made of?

Mr. Gibson.—They will make it in Australia from immature eucalyptus trees.

President.—Is it just a little innovation or is it done because it is cheaper?

Mr. Gibson.—I think it has an economic reason. It is very much more difficult to get wood for veneering purposes. Even if the wood is inferior you could make pulp out of it.

President.—We enquired into the Paper industry before and there was no suitable wood for pulp making on any commercial scale. If you have a pulp mill you will have to have a big one and the Match industry will not be able to absorb all the pulp made there.

Mr. Gibson.—They may make wrapping paper out of pulp.

President.—They do make wrapping paper out of pulp manufactured from sabai grass.

Dr. Matthai.—How long ago did you go to Australia?

Mr. Gibson.—I returned only in December.

Dr. Matthai.—What was the idea of this deputation?

Mr. Gibson.—I was sent over there by the Government to advise the Commonwealth Government on the starting of a Forests Products Laboratory.

President.—Did you see any forests in Sweden?

Mr. Gibson.—Only a few.

President.—Did you go there in the winter?

Mr. Gibson.—I went in November.

President.—That was not the season for felling.

Mr. Gibson.—No. I was too early. I understand they fell in the snow. The important part of the work in Sweden is the extent to which co-operative work is used in the extraction of their wood. All the traders combine and the wood is floated by co-operative societies and is distributed to the owners when it reaches the mills.

President.—I was not able to see any forest either although I saw some factories.

Mr. Gibson.—Strangely enough our Commercial Attaché both in Stockholm and in Oslo could not give me any assistance.

President.—I was very fortunate in that respect. The Swedish Match Company showed me all that I wished to see. But, of course, I did not go to the forests.

Mr. Mathias.—I understand that the views put forward are your personal views; they are not necessarily the views of your Government.

Mr. Gibson.—I am in no way the accredited representative of my Government.

Mr. Mathias.—Or of your department. They are I understand your personal views. This is what the Government of Bihar and Orissa say in their letter of the 21st February, 1927: "I am to request that the opinions expressed both by Mr. Gibson and by Mr. Gupta may be read as the personal opinions of those two officers".

Mr. Gibson.—I have not seen that, but I am quite content to leave it at that.

Wood supply.

Mr. Mathias.—Which are the kinds of wood that exist in Bihar and Orissa which you find mainly suitable for the match industry?

Mr. Gibson.—They are mentioned in detail in Mr. Ghosh's report.

Mr. Mathias.—The three main kinds I understand are *Trewia nudiflora*, *Odina woder* and *Bombax malabaricum*.

Mr. Gibson.—Yes, and to that I may add *Boswellia serrata*.

Mr. Mathias.—You have not given us any estimate of the available supplies.

Mr. Gibson.—Nor has it been attempted. It is not possible to give you any figures without making an enumeration survey.

Mr. Mathias.—Has no enumeration been carried out?

Mr. Gibson.—None whatever.

Mr. Mathias.—So far as you have observed in the province the woods occur rather scattered?

Mr. Gibson.—So scattered that I would add that their economic extraction is almost impossible at present.

Mr. Mathias.—So that in the absence of plantation it would not be a feasible proposition to establish a match factory in Bihar and Orissa?

Mr. Gibson.—I don't think so.

Mr. Mathias.—As regards plantation, I understand that you have started plantation very recently.

Mr. Gibson.—Quite recently; to be accurate in July 1925.

Mr. Mathias.—There too you have got very little information.

Mr. Gibson.—We have no data at all so far.

Mr. Mathias.—Were the trees transplanted?

Mr. Gibson.—Yes, from nurseries.

Mr. Mathias.—Have they done well so far?

Mr. Gibson.—Not as well as they should have because of carelessness in putting up the fences too late.

Mr. Mathias.—What did they suffer from mainly?

Mr. Gibson.—Partially draught and largely illicit grazing and deer grazing.

Mr. Mathias.—*Bombax malabaricum* is particularly liable to grazing by cattle, is it not?

Mr. Gibson.—Yes.

President.—Was it a clear felled area?

Mr. Gibson.—Yes. It was sal forest—one at Posoita and the other is at Gollkera.

Mr. Mathias.—At what stage do these trees reach comparative maturity, that is to say at what stage would they be fit for cutting for use in match factories?

Mr. Gibson.—Assuming the minimum girth is 20 inches for manufacture of matches I should say 25 years.

Mr. Mathias.—Have you worked out any figures as to whether plantation would be a profitable undertaking for Government?

Mr. Gibson.—I have, in connection with an enquiry from the Director of Industries, Bihar and Orissa, to start a small plantation near Patna, and there were every stick is saleable if not in the shape of timber then as fire wood for Patna City, it would be a paying proposition.

Mr. Mathias.—What price per ton would cover your capital expenditure. What is the rate of interest you calculate? Is it 4 per cent.?

Mr. Gibson.—The usual rate of interest in this country.

Mr. Mathias.—What price would re-imburse you for your capital expenditure with compound interest?

Mr. Gibson.—I have not worked that out. We are in the experimental stage yet.

Mr. Mathias.—But you are satisfied that in this one particular area it would be financially profitable to Government?

Mr. Gibson.—Yes. I sent up a report to Government but Government did not proceed with the proposal, though from my experience in the Punjab I can tell you that our irrigated plantations there chiefly of sisoo and mulberry give as high a return as Rs. 22-8-0 per acre per annum nett.

Mr. Mathias.—What is the royalty charged for these trees?

Mr. Gibson.—Absolutely nominal because there is no demand. I could not quote off-hand.

Mr. Mathias.—You say you have experience in the Punjab and the conditions as regards timber there were specially favourable.

Mr. Gibson.—Very favourable.

Mr. Mathias.—What is the source of supply?

Mr. Gibson.—We have got large coniferous forests in the upper reaches of the Punjab rivers and the timber can be easily floated in the shape of small logs down to the depots.

Mr. Mathias.—These are mainly *Pinus excelsa* which are suitable for matches?

Mr. Gibson.—As a matter of fact we have also experiment at home at Bryant and May's with Himalayan spruce and Himalayan fir and they made good matches.

Mr. Mathias.—We were told that these timbers had to be veneered very fresh, almost as soon as they were cut, in order to get good results.

Mr. Gibson.—I know, but the alternative is boiling. You can boil the wood if necessary.

Mr. Mathias.—At present the Mahalakshmi factory in Lahore is obtaining its splints from Kashmir, so that the local supplies *primâ facie* would not appear to be very plentiful.

Mr. Gibson.—They are getting wood partially from Kashmir and partially from the banks of the Indus that is *Populus euphratica*.

Mr. Mathias.—It looks as though there is difficulty about getting wood. They are also getting *Bombax malabaricum* from the United Provinces.

Mr. Gibson.—They may not have been able to come to terms with Government.

Mr. Mathias.—They told us that Government had been rather kind to them regarding the supply of blue pine.

Mr. Gibson.—I am not in touch with recent developments.

Mr. Mathias.—The blue pine is used for other purposes also, is it not?

Mr. Gibson.—Yes.

Mr. Mathias.—You say when you came back to the Punjab you got reputable Indian and British firms interested in the subject of the Match industry in the Punjab. What negotiations did you undertake?

Mr. Gibson.—To deliver timber on the banks of the Beas river

Mr. Mathias.—Why did the negotiations come to nothing?

Mr. Gibson.—That I am unable to say. Government simply dropped it.

Mr. Mathias.—Were they negotiations for the supply of timber for a certain number of years?

Mr. Gibson.—The basis of the agreement was a share in the profits of the concern because we did not know what royalty to charge. Therefore we thought that a more reasonable course to take would be to take a share in the profits.

Plantations.

Mr. Mathias.—As regards the plantations which you have undertaken what species have you selected?

Mr. Gibson.—Here is a list of the trees planted (shown). These are in the plantation in Puri.

President.—Are these all suitable for match purposes?

Mr. Gibson.—They have all been tested at one time or another.

Mr. Mathias.—You find that so far as plantation is concerned it pays you better to mix your species?

Mr. Gibson.—I think so.

Mr. Mathias.—What is the reason for that?

Mr. Gibson.—To prevent insect attacks chiefly. If you have all one species you might get insect and fungal attack which will wipe out the whole thing. Also, we want to get comparative data of growth and see which are quickest growing trees under plantation conditions.

Mr. Mathias.—How do you undertake plantation? Have you any wandering tribes there?

Mr. Gibson.—No. We find our local labour supply sufficient.

Mr. Mathias.—What does it cost you to plant?

Mr. Gibson.—Only Rs. 15 per acre, but if you add fencing, you have to add about Rs. 25.

Dr. Matthai.—This Rs. 15 is just the cost of clearing and planting?

Mr. Gibson.—Yes. That is the first year's cost.

Mr. Mathias.—Three years would be the time that they would have to be looked after?

Mr. Gibson.—They would be established in three years and the cost including fencing would be about Rs. 50.

Mr. Mathias.—It is very much lower than the cost given to us in Burma.

Mr. Gibson.—The labour rate is 7 annas a day, and we use a lot of women and children.

Mr. Mathias.—Is this forest village labour?

Mr. Gibson.—No, ordinary village labour.

Dr. Matthai.—How many trees will you plant per acre?

Mr. Gibson.—It varies according to the species. We are trying various species and according to the espacement the number will be greater or smaller. I should say the average is 8' × 8'.

Dr. Matthai.—What does that mean?

Mr. Gibson.—About 600 to 700 trees per acre.

Mr. Mathias.—You say that every match factory of any importance in India is controlled by the Swedish Match combine.

Mr. Gibson.—Yes.

Mr. Mathias.—But so far as we know that is hardly a correct statement of the case.

Mr. Gibson.—Somebody has stated that. As I say I have not been in touch with developments during the last two years.

Mr. Mathias.—This is not based on any definite data?

Mr. Gibson.—No.

Mr. Mathias.—This is general information?

Mr. Gibson.—Yes, talking with various business people and so on.

Mr. Mathias.—What is the practice in the Forest department in Bihar and Orissa as regards the sale of trees? Do you sell them at the rate of 50 c. ft. per ton?

Mr. Gibson.—Our general principle in our annual sales is to sell the coupes, as we call them, the area to be cut every year divided into suitable lots, by auction.

Mr. Mathias.—That is the auction system. Supposing you had departmental felling? You do that occasionally, don't you?

Mr. Gibson.—We do it very rarely.

Mr. Mathias.—When you do that how do you sell the timber?

Mr. Gibson.—We sell by the foot girth and not by the cubic content.

Mr. Mathias.—Do you make any allowance for the bark in that?

Mr. Gibson.—No.

Mr. Mathias.—The reason why I am asking you this is, the Chief Forest Officer, Andamans, was telling us yesterday that in selling match wood from the Andamans they make some allowance to cover the bark and we have no information that such is the practice in any of the main provinces in India.

Mr. Gibson.—When we sell the tree by girth measurement it is measured over the bark.

Dr. Matthai.—These plantations are undertaken primarily for match factories?

Mr. Gibson.—Yes. It is an experiment started by myself as a means of encouraging the industry and getting data for future development.

Dr. Matthai.—Is there at present sufficient demand for wood from your existing match factories to justify a plantation?

Mr. Gibson.—No. We have only got a demonstration factory at Gulzarbagh and there are a few small match factories in the province. I personally only know of one in Puri which is quite a small affair.

Dr. Matthai.—Taking this plantation as an experimental one is it part of your policy to extend your plantation every year? You say you started with 60 acres and you say the area is being further extended by 400 acres this season. Do you intend to plant the whole of the 400 acres?

Mr. Gibson.—The clearing has been done but the planting has been done more slowly. My idea is to plant the 400 acres.

Dr. Matthai.—What is the total area under plantation?

Mr. Gibson.—I was away at the end of last year since July and I do not know, but I could ascertain that for you.

Mr. Mathias.—Is it your policy to plant a certain definite area each year?

Mr. Gibson.—No. There is no definite programme at present. It is purely an experimental work. If the work of the first two years is successful I would probably go up to Government and ask for permission to speed up the programme.

Mr. Mathias.—What is the distance of the plantation from Calcutta?

Mr. Gibson.—Roughly 250 miles.

Mr. Mathias.—Then the railway freight would be prohibitive so far as factories in Calcutta are concerned?

Mr. Gibson.—Yes. I hold the view that the factory should be at the site of the supply of timber.

Mr. Mathias.—Railway freight will come to about Rs. 13 a ton?

Mr. Gibson.—Yes. I think it is sound to keep your factory close to your permanent source of wood supply if you can.

Mr. Mathias.—What sort of area do you think you would be able to plant each year with your available labour?

Mr. Gibson.—It is not so much a question of available labour as available funds. We can recruit quite a large labour gang.

Mr. Mathias.—Supposing funds were available?

Mr. Gibson.—We could plant up to 400 acres a year.

Mr. Mathias.—Steadily and continually.

Mr. Gibson.—Yes.

Mr. Mathias.—On an average the cost will be Rs. 50?

Mr. Gibson.—Yes, for establishment and fencing.

President.—Have you seen the Gulzarbagh factory?

Mr. Gibson.—I have not been there.

President.—Who is in charge of it now?

Mr. Gibson.—I am not quite sure who is in charge now, but I think it is not working at present.

Mr. Mathias.—Has it been sold?

Mr. Gibson.—There was a proposal before the Board of Industries of which I am a member but I do not know the outcome of the negotiations.

President.—I suppose you have studied Mr. A. P. Ghosh's report?

Mr. Gibson.—Yes.

President.—He has given an account of the industry which has led people to think that it is a very good proposition to start the match industry in Bihar and Orissa.

Mr. Gibson.—It did give that impression.

President.—What do you think? Is that justified by your actual knowledge of the facts?

Mr. Gibson.—My opinion is that there is no scope for the development of the match industry in Bihar and Orissa unless we start plantation on a large scale, and the time is not ripe for plantation until we have data from the experimental plantations already started. Two years hence we will be in a position to tell you what can be done.

Mr. Mathias.—Two years from now?

Mr. Gibson.—Yes.

President.—Mr. Ghosh has given a list of 126 varieties of wood which he thinks may be more or less suitable. Do you think that is rather an exaggeration.

Mr. Gibson.—I fear so. We have now boiled it down to 10.

Mr. Mathias.—Of these 10, about four which you have marked with asterisk you say you have no information. So that limits your number to 6?

Mr. Gibson.—That is so.

President.—Mr. Troop's book and Mr. Ghosh's two reports, one for Bengal and one for Bihar and Orissa, have spread the impression—and a very strong one—that there is any amount of wood available and that there is no end to the possibility of expansion of the Match industry in the country.

Mr. Gibson.—I am sorry to say the optimism is ill-founded.

President.—You have also pointed out that Mr. Troup was very largely influenced by German manufacturers of machinery.

Mr. Gibson.—I was at Dehra Dun at that time and then a representative of a German firms—Rollers—came along and the woods were tested. It was to their interest to say that any number of woods was suitable in order to get a sale for their machinery in this country. That was what happened.

Dr. Matthai.—The only action taken so far by the Bihar and Orissa Government on Mr. Ghosh's report is to start the demonstration factory at Gulzarbagh?

Mr. Gibson.—Yes.

Dr. Matthai.—I believe that was directly the result of his report.

Mr. Gibson.—I have no evidence but I believe so. That is, however, more a question for the Director of Industries.

Conditions in Australia.

President.—As regards Australia, did you discover whether the people were finding any difficulty in producing these matches?

Mr. Gibson.—None. This particular factory I was talking about employs 600 hands—400 girls and 200 men—and the minimum wage of the men is £4-7-6 per week and that of the girls about £2-10-0 per week.

Mr. Mathias.—Have you any information as to their cost per gross?

Mr. Gibson. No. But I believe they are making a profit.

President.—What are the working hours. For how many hours do they work a week?

Mr. Gibson.—44 hours.

Mr. Mathias.—A fair amount of work is done by the hand process?

Mr. Gibson.—I saw nothing done by hand except of course handlings the logs for feeding the rotaries and so on.

Mr. Mathias.—600 seems to be rather a large number if they are employing a rotary machine.

Mr. Gibson.—Yes. But a certain amount of filling is done by hand by the girl labour. The machine is supposed to do it but it requires a lot of attention.

President.—You say they do the box filling by hand, and what else?

Mr. Gibson.—Supervision of the filling because the filling machines have to be carefully supervised.

Mr. Mathias.—What about gross packeting? Is that done by machinery?

Mr. Gibson.—My recollection is that it is done by a machine, only the girls dab the paste at each end.

President.—This seems rather a large number. Is it a labour question that they must employ so many men?

Mr. Gibson.—I am relying on what the manager told me.

President.—600 does seem rather a large number even compared to India for that output.

Mr. Gibson.—In addition to that they were making wax vestas. I do not know what the output was.

President.—Possibly that may account for it. I suppose matches are not very cheap in Australia.

Mr. Gibson.—They also do the whole of their printing in the factory and also the packing cases.

Mr. Mathias.—What is the price of matches in Australia?

Mr. Gibson.—One penny a box in a tobacconist's shop.

Mr. Mathias.—It is practically the same as the British price.

Mr. Gibson.—Yes. I did not make any special enquiry into this.

President.—When were you in the United Provinces?

Mr. Gibson.—I was Forest Inspector at Dehra Dun in 1905 and Forest Economist in 1908 and against Forest Economist in 1919-1920.

President.—In Mr. Pearson's time?

Mr. Gibson.—Yes.

President.—At that time the match question was not a live one.

Mr. Gibson.—No.

President.—And you never took any particular interest in it?

Mr. Gibson.—No.

Mr. Troup's enquiry.

President.—Do you know what led to this enquiry by Mr. Troup?

Mr. Gibson.—I think it arose directly as an attempt to start a new industry in India.

Mr. Mathias.—Did he undertake it of his own initiative?

Mr. Gibson.—No. I presume he got his orders from the Government of India.

President.—Perhaps, the German people suggested the idea that the Match industry could be started in India.

Mr. Gibson.—I think they had something to do with the enquiry being undertaken.

President.—As far as you know the Puri factory is the only factory that remains of the old lot?

Mr. Gibson.—That is the only one of which I am aware in Bihar and Orissa.

President.—Where are these Bettiah Raj forests?

Mr. Gibson.—They are in the extreme north-west on the borders of the Gorakhpore district of the United Provinces with Nepal on the north.

President.—Are they connected by rail?

Mr. Gibson.—The Bengal and North-Western Railway runs to Narayan-gunge which is the southern end of the Bettiah Raj forest and I suppose the average lead is 22 miles from the forest to the rail head.

President.—Is it well provided with roads?

Mr. Gibson.—No.

President.—These two sites that you have selected, are they near railway stations?

Mr. Gibson.—Yes.

President.—Can you get as much land as you like for plantation purposes in those areas or are you limited by any labour conditions?

Mr. Gibson.—We are limited, but the sites are purely experimental at present. We can extend them at both sites to possibly 1,000 to 1,200 acres each; and if they are successful we can get equally well situated areas near the railway elsewhere.

President.—What is your policy? Do you intend to persist in your investigations or are you going to abandon these plantations?

Mr. Gibson.—As I say it is only experimental at present. Should they prove successful and should there be a demand they can be expanded at a maximum rate of 400 acres per annum.

President.—When would you know whether you are to pursue the policy or not?

Mr. Gibson.—About two years from now.

Dr. Matthai.—Are there to your knowledge any cottage match factories in Bihar and Orissa?

Mr. Gibson.—I am not aware of any.

Chief Forest Officer, Andaman Islands.

A.—WRITTEN.

(1) *Letter from the Tariff Board, to the Chief Forest Officer, Andaman Islands, Port Blair, dated the 9th April 1927.*

I am directed to invite a reference to the attached copy of a letter addressed by the Indian Tariff Board to all local Governments and to that of the reply received thereto from the Government of Burma, and to say that the Board, during the course of the enquiry now proceeding into the circumstances of the Match-making Industry, has learned that certain of the match factories situated in Rangoon import some of their supplies of timber from the Andaman Islands. This fact is of considerable interest to the Board, and I am, therefore, to ask you to be so good as to furnish it with detailed information in answer to the following questions:—

(1) The existence, quantity and suitability of wood for the manufacture of—

- (i) splints,
- (ii) veneers, and
- (iii) packing cases.

(2) The proximity and accessibility of the source of supply of such timbers to Port Blair or any other port of export.

(3) Have consignments of such woods been exported to India or Burma in the past? If so, please give the quantities—if available—which have been so exported during the last three years.

(4) Have such consignments been extracted and exported by Government agency or by contractors? In either case please state:—

- (a) the price f.o.b. port,
- (b) the cost of freight to Rangoon, and
- (c) the cost of freight to Calcutta.

(5) If by contractors, what are the conditions under which permission for extraction is given?

(6) What is the royalty levied on the different species?

(7) What quantities of wood suitable for the manufacture of splints or veneers could be exported annually and in accordance with the forest working plans from the Andaman forests at a price not exceeding Rs. 35 per ton of 50 cubic feet landed at Rangoon? In your answer please specify the different kinds of wood and the tonnage of each.

(8) Have any concessions for extracting timber for the manufacture of splints, veneers or packing cases been granted? If so, to whom?

(9) Has the Forest Department undertaken or is it likely to undertake in the near future any operations for the establishment of plantations of trees suitable for the manufacture of matches in the forests under your charge?

(10) Have any areas accessible to Port Blair or any other port of export been planted with suitable trees by any outside agency?

(11) What are the conditions of transport from the forests in which suitable timber is found to the port of export:—

- (a) during the monsoon;
- (b) during the dry season;

and what is the cost of transporting the timber by each of any methods which may be employed?

2. I am to add that the Board would be glad if your answers to these questions could be sent by the 16th May 1927.

(2) *Letter from the Chief Forest Officer, Andaman Islands, dated the 17th May 1927.*

With reference to your letter No. 301, dated the 9th/12th April 1927, I have the honour to reply as follows:—

(1) As the demand for these timbers has only recently sprung up, no enumerations are available of the quantities of suitable woods for match manufacture but as a rough estimate I give 3 tons per acre over 1,500 square miles of forests, i.e., 2,880,000 tons say 144 million cubic feet but it is probably more.

The only information I have of the suitability of timber for the different purposes has been obtained from Messrs. Adamjee Hajee Dawood & Co., Rangoon, who inform me that Dhup (*Canarium euphyllum*) is the most suitable wood which they have found for making match boxes and *Sterculia campanulata* for splints. I cannot give an estimate of the quantity of these woods available in the Andamans, they probably amount to 1/3rd of the available supplies given above.

(2) Exploitation is not very difficult from any part of the Andamans as most of the timbers float and can be rafted. There are quite a number of good harbours where it can be shipped. The timber is now in the first instance carried by a Forest Department steamer to Port Blair or rafted to Stewart Sound and thence exported to Burma or India by the Government steamer. The sources can be tapped throughout the year by continual shifting of extraction camps to suit the different seasons.

(3) The following are the exports during the last year:—

	Papita.	Dhup.
	Tons.	Tons.
To Rangoon	1,151	3,494
To Calcutta	598	nil.

(4) The timber is being extracted by Government Agency.

No timber has been sold at f.o.b. rates.

Present price c.i.f. Rangoon is Rs. 35 for Papita and Rs. 40 for Dhup. Freight is Rs. 10 for Papita and Rs. 12-8-0 for Dhup. This low freight was fixed in order to enable us to establish a demand for the timber but these rates are likely to be increased in the future.

The timber is sold in Calcutta at Rs. 37-8-0 and the freight is Rs. 12-8-0 per ton.

(5 and 6) There are no contractors and hence no royalty is charged.

(7) No working plan for these timbers is at present in existence but I estimate that 5 to 6,000 tons could be exported annually at present and 5 or 6 times that amount if sufficient transport to India or Burma were available.

I regret I have no figures for the different kinds of wood but include *Sterculia campanulata*, *Sterculia alata*, *Canarium euphyllum*, *Bombax malabaricum*, *Tetrameles nudiflora*, *Sterculia villosa* and a few other species in the estimate given in paragraph 1. I hope the price of timber will go up to Rs. 50 per ton c.i.f. Rangoon or Rs. 60 c.i.f. Calcutta as present prices leave little profit.

(8) No concession has been given but the forest department has agreed to supply about 5,000 tons this year to Rangoon and 2,000 tons to Calcutta.

(9) The forest department has made experiments with plantations of *Canarium euphyllum* mixed with other timbers but sufficient data for the purpose of answering the enquiry of the Tariff Board are not available. Nearly every part of the Andamans outside the settlement, which is some 50 square miles is under forests.

(10) No land is available for plantations of matchwood by private agency.

(11) Timber is brought to Port Blair by a forest department steamer at a cost of Rs. 4 per ton and can be thus transported all through the year.

General conclusion.

I am of opinion that the establishment of a factory locally would be the most economical in the long run for the freight of timber will be too high to allow large quantities to be exported as there is very little inward cargo. That low freight has been secured at present is due to the fact that a Government steamer would go empty once a month to Rangoon without the cargo of logs. This, however, is not likely to last and the ruling commercial rates under similar conditions must be taken as a basis for calculating freight for the future. Logs take up too much space in a ship to allow of this cargo being carried at a low freight rate.

A site for a factory would probably be given free by Government. The main difficulties against establishing a factory locally are that skilled labour would have to be imported and the supply of chemicals, etc., can only come to the Andamans by the Government steamer which leaves Calcutta and Rangoon about once a month. Including royalty a steady supply can be assured at about Rs. 30 per ton delivered in a factory in the Andamans, the cost would probably be less in the beginning. Labour would perhaps cost Re. 1 per diem for adults with corresponding reduction for women and children. Skilled artisans would perhaps average double this amount.

It seems to me that the most important factor for the successful working of a match factory is that timber supplies are always available so that the factory can be run at all times to its full capacity. The supplies of chemicals and labour can be arranged with good management. Freight for the finished product is always available but stocks would have to be kept in Calcutta and Madras. Freight for the finished product should not exceed Rs. 10 per ton of 50 cubic feet as the cases are small and pack well in the ship's hold.



CHIEF FOREST OFFICER, ANDAMANS.

B.—ORAL.

**Evidence of Mr. M. C. C. BONINGTON recorded at Calcutta on
Tuesday, the 14th February, 1928.**

Introductory.

President.—You are the Chief Forest Officer, Andamans?

Mr. Bonington.—Yes, I am the officiating Chief Forest Officer.

President.—Is that your official designation?

Mr. Bonington.—Yes.

President.—How long have you been in charge of this office?

Mr. Bonington.—For the last 13 months; but I have been in the Andamans for thirty years, ever since 1897.

President.—Where are your headquarters?

Mr. Bonington.—Port Blair.

President.—Are these forests very far away from Port Blair?

Mr. Bonington.—The country surrounding Port Blair has been deforested for settlement. There are small areas of forests here and there still but not very large forests.

President.—Which is your principal port for export?

Mr. Bonington.—Port Blair and Stewart Sound. The latter is in the North Andaman—about 90 miles north of Port Blair.

President.—You have got fairly good waterways?

Mr. Bonington.—We have got the sea. Timber from outside Port Blair is brought in by a cargo steamer which carries about 350 tons. In fine weather it is also floated.

President.—Does the steamer go into the interior?

Mr. Bonington.—It goes up the coast and goes up the larger streams inland. In the fine weather, we raft the timber. As far as match timber is concerned, it all floats and it can be rafted over the open sea six months during the year or perhaps more.

President.—All the year round practically you can float the timber.

Mr. Bonington.—We can't float all the year round. By floating I mean the timber has to be rafted and towed by the launch. It can't be floated outside the creeks without the help of a launch. We have a steamer which loads the timber in its hold and we have no loss while when rafting timber by towing over the open sea there are often losses.

President.—Are the waterways navigable throughout the year?

Mr. Bonington.—Yes. We have to change our camps. Some parts of the seashore are exposed to the North-East monsoon; there are other parts which are exposed to the South-West monsoon. There are also other parts where there is no water in the dry weather and according to the conditions are favourable or not we change our camps but we can work all the year round.

President.—Has there been any enumeration made of the quantities available?

Mr. Bonington.—I have made an enumeration for the working plan mainly of padauk timber but of papita and of match wood generally and of dhup I have had enumerations made so far of only about 10 square miles. That is 100 per cent. and 50 per cent. enumeration.

Mr. Mathias.—What does that work out to per square mile?

Mr. Bonington.—Four tons per acre is an estimate of standing trees. But I still contend, as I told you originally, that it would safer to calculate on 3 tons per acre.

Mr. Mathias.—Is that a representative area?

Mr. Bonington.—Yes. We have taken enumerations of evergreen forests as well as desiduous forests.

President.—Is it easily accessible?

Mr. Bonington.—One of the easiest places to extract.

Dr. Mathai.—That would be typical of the whole area in the island?

Mr. Bonington.—Yes, typical of the whole area, either deciduous or evergreen forests. In the evergreen forests, there is very little dhup. Roughly I should say taking 3 tons per acre for the whole area under forests, there would be two-thirds of papita and one-third of dhup.

Mr. Mathias.—You have given an estimate of the quantity of stock available in the Andaman forests and you have given one reason which limits the amount which can be got out annually, namely, the amount of freight to Calcutta and Rangoon.

Mr. Bonington.—That is the whole issue.

Difficulties of extraction.

Mr. Mathias.—Apart from that, are there any difficulties with regard to extraction? I understand that there are difficulties about elephants. You use elephants, don't you?

Mr. Bonington.—Yes, and we use also buffaloes.

Mr. Mathias.—Have you used buffaloes so far?

Mr. Bonington.—Yes.

Mr. Mathias.—To any great extent?

Mr. Bonington.—To a considerable extent in the last year or two.

Mr. Mathias.—Are you using elephants too?

Mr. Bonington.—Yes, for heavy timber but papita and dhup can be extracted by buffaloes just as well.

Mr. Mathias.—If you were to attempt to extract anything very much in excess of your present amount of 5,000 tons a year, would you require a large number of buffaloes?

Mr. Bonington.—Yes, a fair number.

Mr. Mathias.—Would you have any difficulty in getting buffaloes?

Mr. Bonington.—I don't think that there will be any trouble. But there is another factor. I would not like to see all the soft woods extracted and the hard woods left behind because we use the soft wood as floaters. They must go hand in hand.

Mr. Mathias.—On this question of buffaloes, where do you get them from?

Mr. Bonington.—From Burma.

Mr. Mathias.—To what extent do you think you can augment the number of your buffaloes now?

Mr. Bonington.—I don't think that there is any difficulty in extracting even 20,000 tons a year.

Mr. Mathias.—That would be the limit of your ability to extract?

Mr. Bonington.—I would not even say that. There should be a limit to the amount I would extract because I would like to keep some soft woods to take out the hard wood.

Mr. Mathias.—We are just dealing with the question of buffaloes for the moment. Would there be any difficulty for contractors to get buffaloes?

Mr. Bonington.—There are no contractors in the Andamans.

Mr. Mathias.—Is it all departmental feeling?

Mr. Bonington.—It is nearly all departmental. There are a few local traders and cultivators in the island itself who are allowed to extract timber near the Settlement.

Mr. Mathias.—As far as departmental work is concerned, you see no difficulty as regards obtaining cattle for dragging?

Mr. Bonington.—No.

Mr. Mathias.—As regards elephants, is there any difficulty in feeding them in some parts of the year?

Mr. Bonington.—Yes. But I don't think that is a very important factor. It would not prevent extraction of timber.

Mr. Mathias.—You see no difficulty as regards that point?

Mr. Bonington.—No.

Mr. Mathias.—As regards the question of using soft wood for floating down hard wood?

Mr. Bonington.—Hard woods have got to be floated. If I take out all the soft woods I will have no soft wood left to float hard wood.

Mr. Mathias.—In common with the whole of India, you find hard wood more profitable than soft wood.

Mr. Bonington.—Yes, it is.

Mr. Mathias.—To what extent would that limit your annual extraction?

Mr. Bonington.—It is very difficult to give you a correct figure without having made some calculation on the point. I don't think I would have any difficulty in working 20,000 tons annually of soft wood.

Mr. Mathias.—That would be the limit?

Mr. Bonington.—I think it would be at present but that is only a rough figure.

Cost of extraction.

Mr. Mathias.—As your work is done departmentally, you don't charge any royalty, but what figure would you charge for your profit?

Mr. Bonington.—I have got our figures here (shewn). The cost of logs from the South Andamans worked out at Rs. 14-8-1 per ton and that from the North Andamans Rs. 15-14-3, delivered on board the ship—f.o.b. in both cases.

Mr. Mathias.—Rs. 14-8-0 would be the average.

Mr. Bonington.—Yes, including the interest at 5 per cent. On capital it works out like this.

Mr. Mathias.—What do you estimate your capital value at?

Mr. Bonington.—The total invested capital for exploiting timber in the Andamans is Rs. 17,26,169; Rs. 1,76,000 is invested in elephants and buffaloes Rs. 3,87,853 in steamers and launches and boats for extraction and the remainder in mills and buildings.

	North Andamans.	South Andamans.
	Rs. A P.	Rs. A. P.
Cost of timber extracted to the coast	14 11 8	9 15 11
Cost of transportation	1 3 11	4 10 8
Export charges	1 4 11	1 1 7

I may say that the cost of transportation in the North Andamans is much less because it is just round Stewart Sound. Now I should like to explain what these charge include. They are—

Exploitation.

Salaries.

Wages and allowance for subordinate establishment.
 Office establishment.
 Wages, allowances and rations of labour.
 Maintenance and upkeep of livestock.
 Stores.
 Maintenance of roads and bridges.
 Recruiting, passage expenses of labour.
 Local establishment.
 Local labour.
 Payment to contractors (we employ contractors locally and pay them Re. 1 per ton for felling and lugging).
 Steam launches.
 Miscellaneous.
 Interest.
 Depreciation.
 Proportion of general establishment (that is pay of the Divisional Forest Officer and his office staff. We have the cost and distribute it over extraction, milling and transportation).

Mr. Mathias.—The interest on your capital charges means merely interest on the capital employed in extraction?

Mr. Bonington.—That is right.

Mr. Mathias.—It does not include interest on any money invested in the forests?

Mr. Bonington.—No. It is simply on the plant employed on extraction.

President.—It includes no royalty?

Mr. Bonington.—No.

President.—What is the royalty that Government expects on hard wood?

Mr. Bonington.—I think that we ought to have a royalty of Rs. 10.

Mr. Mathias.—On hard wood?

Mr. Bonington.—No, on soft wood. On hard wood it should be Rs. 15. My reason for saying that is that exploitation in the Andamans is comparatively cheap whereas administration is expensive due to the fact that we have to employ launches to go from one part to another.

Mr. Mathias.—The royalty of Rs. 10 is very much in excess of the royalty charged in other provinces.

Mr. Bonington.—Our present rate is about Rs. 6.

Mr. Mathias.—Your extraction charges including interest come to Rs. 14-8-0. To that we have to add Rs. 6 as royalty. That brings the total to Rs. 20-8-0.

Mr. Bonington.—Yes.

Mr. Mathias.—What is your freight Calcutta?

Mr. Bonington.—Rs. 12-8-0.

Mr. Mathias.—In your statement you say it is a concession rate.

Mr. Bonington.—Yes. Then we have Martin's charges.

Mr. Mathias.—What are Martin's charges?

Mr. Bonington.—That is their commission which is Rs. 1-8-0.

Mr. Mathias.—That makes it Rs. 34-8-0 per ton.

Mr. Bonington.—Yes. Last year our total charges came to Rs. 37-8-0.

Mr. Mathias.—You are limited in your export to Calcutta by the amount of freight at your disposal?

Mr. Bonington.—Very much.

Mr. Mathias.—At present you only export about 2,000 tons.

Mr. Bonington.—Somewhere near that. I can increase the amount by chartering another steamer.

Mr. Mathias.—Excluding that consideration it would only pay you to export a larger amount than 2,000 tons if you were able to command a price which would cover freight to and from Calcutta?

Mr. Bonington.—Yes. I will say an amount larger than 3,000 tons.

Mr. Mathias.—So that we have to add on another Rs. 12-8-0 to this.

Mr. Bonington.—Yes.

Mr. Mathias.—That would make the total Rs. 47.

Mr. Bonington.—Yes.

Mr. Mathias.—So that if you are going to establish a permanent market, you must get Rs. 47-8-0?

Mr. Bonington.—You are right.

President.—Would that ensure a regular freight?

Mr. Bonington.—Yes, but I want to mention one point. Rs. 15 is our average cost of extraction for soft wood and hard wood. Soft wood is easier to cut, easier to drag and easier to bring down obviously.

President.—If you are to sell your timber at Rs. 47-8-0 or anywhere near that, there is this genwa available here which sells at Rs. 30 to Rs. 40 per ton. Unless you are able to bring down your price to somewhere about that level you will find it very difficult to dispose of that wood.

Mr. Bonington.—I believe so.

President.—It does seem to me that it might be possible for Government so to arrange that it can be sold here ex-ship at about Rs. 40 per ton.

Mr. Bonington.—Where we are always tied is that we cannot export logs at a cheap freight rate.

We could not arrange for freight and would have to go to Messrs. Turner Morrison and ask them what they would charge for the logs, and they would quote Rs. 30 to Rs. 35.

President.—It might be possible for Government to exploit certain favourable areas where the cost of extraction would be less.

Mr. Bonington.—That is another question.

President.—Apart from the question of competition of genwa, it is necessary for the forest administration to take a long view. I understand that the Government of India are considering the best means of exploiting the timber from the Andamans over a period of years. We find that in Sweden the price of aspen is approximately Rs. 58 per ton and if we are to allow for the extra wastage in match manufacture in the case of India wood, the equivalent of that would be about Rs. 42 a ton, so that taking a long view it would be necessary for you to sell at between Rs. 40 and 50 for this reason that although at present with a duty of Rs. 1-8-0, it might be profitable to pay a higher rate than Rs. 50, we must think of a time when the match industry must do without protection. If, say in 15 or 16 years time the protective duty, if one was recommended, was taken off and you developed much trade at Rs. 50 a ton, then suddenly all your arrangements would be thrown out of gear. Therefore you must aim at a constant price of Rs. 40.

Freight charges.

Mr. Bonington.—The solution does not lie there. The solution lies in the establishment of a match factory in the Andamans.—Apart from this I cannot see any day light on this question because of the high freight rate of sending logs to Calcutta.

President.—Government just now runs its own service. The Maharaja belongs to Government, does it not?

Mr. Bonington.—Yes. She is chartered by Government.

President.—Is that the only ship?

Mr. Bonington.—No. There is another small steamer called the Ahmedi.

President.—They are run by Messrs. Turner Morrison and Company for Government?

Mr. Bonington.—Turner Morrison and Co., are the owners of the Maharaja and a Bombay Co., of the Ahmedi. Turner Morrison & Co., act as Agents for Government in Calcutta.

President.—What is the tonnage of the Maharaja?

Mr. Bonington.—She must be over 2,000 tons, but I cannot say exactly. At any rate she will take about 1,000 tons of timber in scantlings and squares.

President.—I just want to know what she does. She carries cargo one way from there?

Mr. Bonington.—Yes.

President.—She does about one voyage a month?

Mr. Bonington.—About one trip in three weeks.

President.—So that it would be about 15 voyages in a year each way, so it she would bring in about 30,000 tons of cargo?

Mr. Bonington.—Only about 15,000 tons of timber.

President.—What other cargo does she bring from the Andamans?

Mr. Bonington.—She is nearly full up with timber.

President.—I forget what the arrangement between Government and Messrs. Turner Morrison and Company is, but I think they pay them the running charges?

Mr. Bonington.—They pay them so much per ton of the ship's registered tonnage.

President.—What is it?

Mr. Bonington.—I don't know what it is but I know the steamer runs at loss, as it must with a full cargo only one way.

Mr. Mathias.—You have a lot of hard woods?

Mr. Bonington.—Yes.

Mr. Mathias.—Surely sooner or later you will have to employ more ships?

Mr. Bonington.—I will have no difficulty in obtaining ships to carry squares and scantlings but they will not take logs at an economic rate because logs take double the space.

Mr. Mathias.—What rate do you pay for hard wood at present per ton?

Mr. Bonington.—Rs. 10 for scantlings and Rs. 12-8-0 for squares, Rs. 15 for logs and Rs. 20 for padauk.

Mr. Mathias.—Why do they charge so many different rates?

Mr. Bonington.—It is the general custom. I don't quite see the point myself except that logs take more space. They charge Rs. 20 for padauk because padauk can bear that extra freight charge.

Mr. Mathias.—Would you increase your market for hard wood?

Mr. Bonington.—If I have large stocks I can always get a steamer to carry scantlings at economic rates but not logs.

Mr. Mathias.—You are developing the Andamans very largely.

Mr. Bonington.—Yes.

Mr. Mathias.—The exports are increasing also?

Mr. Bonington.—Yes.

Mr. Mathias.—As your shipment increases in hard wood will you not be able to ship a proportion of soft woods?

Mr. Bonington.—No.

Mr. Mathias.—Why?

Mr. Bonington.—Because the freight will kill it.

Mr. Mathias.—At this rate of Rs. 12-8-0.

Mr. Bonington.—No.

Mr. Mathias.—What freight will they ask?

Mr. Bonington.—For logs they would probably ask Rs. 30 and I see their point. The ship will only take half as many logs as scantlings.

President.—What time does the voyage take from Port Blair to Calcutta.

Mr. Bonington.—It takes 3 days going, 3 days coming and 4 days at the Andamans and 5 days at Calcutta.

President.—Supposing it was carrying full load how many days would it take to load?

Mr. Bonington.—She will be loaded in 4 days.

President.—4 days going from here?

Mr. Bonington.—Yes.

President.—4 days loading, that is 8 days and 4 days back and unloading probably 2 days, so that she could not do more than two trips a month?

Mr. Bonington.—No, because there is always a certain amount of other cargo and passengers to be taken on board.

President.—Supposing a special steamer was running?

Mr. Bonington.—Then it would be about right.

Mr. Mathias.—I suppose there is no possibility of rafting the timber in the open sea?

Mr. Bonington.—It is too risky. Even if you raft it in the open sea, when you bring it up here in the river Hooghly it might get stranded.

Mr. Mathias.—What about Rangoon?

Mr. Bonington.—There is very little freight to Rangoon. The ship has got to go there to bring rice and passengers but the ship goes very nearly empty and we can load logs up to the capacity of the ship which is about 5,000 to 6,000 tons a year.

Mr. Mathias.—What is the freight?

Mr. Bonington.—Rs. 10 per ton.

President.—What line runs between Rangoon and the Andamans?

Mr. Bonington.—It is the Ahmedi which is a Government steamer, that is it is chartered by Government.

President.—Do you have any tramp steamers which call occasionally at Port Blair?

Mr. Bonington.—No. We have the Clan line steamer coming up occasionally. There is one such steamer taking timber to London just now. But none except steamers chartered by us call at the Andamans.

President.—Does it call at any Indian port?

Mr. Bonington.—From Port Blair it goes to Stewart Sound and from there to Madras.

Mr. Mathias.—For the same reason you could not increase your quantity to Rangoon?

Mr. Bonington.—No. From April to January we have shipped to Rangoon about 5,854 tons.

Mr. Mathias.—Do you take any special measures to keep your wood fresh? We were told in Dehra Dun that in order to retain the sap in the wood it is necessary for the match manufacturer to adopt various methods.

Mr. Bonington.—I think it is quite enough to leave the bark on and send it fresh. If we had, for instance, entered into a contract with a firm to make a regular supply we could ensure that that timber would keep fresh because it is all the time in water so it won't dry.

President.—Leaving out this question of freight, how much can you guarantee by way of regular supply, say every fortnight?

Mr. Bonington.—8,000 tons annually for Calcutta.

President.—Now we are talking of the supply of larger quantities. You say you are just now limited by the freight?

Mr. Bonington.—Yes. You mean, supposing the freight question was eliminated?

President.—Yes.

Mr. Bonington.—Then I could ship about 10,000 tons a year to begin with.

President.—The point is that 10,000 tons may not attract any steamship, but supposing it was 50,000 to 60,000 tons it might. Could you supply as much as that?

Mr. Bonington.—I should say with the whole outturn of the Andamans it is possible to take that quantity out. The capacity of the forests there is probably about 50,000 tons a year.

Dr. Matthai.—Soft woods alone?

Mr. Bonington.—Yes.

President.—That becomes a different commercial proposition from the steamship company's point of view?

Match factory in the Andamans.

Mr. Bonington.—Yes. What is against the other point, namely having match factories in the Andamans? That would eliminate all this trouble.

President.—There are many considerations. It is not quite so simple as it looks.

Mr. Bonington.—I know the Swedish Match people are quite keen to tackle the problem. I don't think it is difficult myself. We have got factories there. Port Blair is a nice place. It is a pity you have not seen Port Blair. Land is available; you can get land for nothing and we could deliver daily fresh timber at the factory.

President.—There will be the question of freight also, for the finished matches.

Mr. Bonington.—I don't think there is any trouble about that because you can load matches packed in cases and can stow them anywhere in the hold and in the tween deck. Where you cannot stow logs you can stow matches easily.

Mr. Mathias.—I think there will be special freight rates for matches.

Mr. Bonington.—I understand it is about Rs. 12 a ton from Rangoon to Calcutta, and I think that would be about the ruling rate from the Andamans also. And I think any ship would be prepared to go there to take 300 to 400 tons of matches. There would be no difficulty about that at all I think.

Mr. Mathias.—That would be a higher freight than if matches were shipped from places more favourably situated.

Mr. Bonington.—I don't think there would be any difficulty in getting ships to call for 400 tons at the same freight rates as prevail elsewhere.

Mr. Mathias.—You have got to arrange for regular supplies if you have got a match factory there. You would have to keep stocks?

Mr. Bonington.—The Andamans Steamer would probably reserve about 300 tons space every voyage for matches or more because for scantlings and squares we could engage another steamer if necessary.

President.—Has the Swedish Match Company been there?

Mr. Bonington.—Yes.

Mr. Mathias.—That would not utilise very much wood.

Mr. Bonington.—I was thinking of having matches manufactured locally. I mean 300 tons of manufactured matches. I believe that is where the solution lies.

Mr. Mathias.—Do you think you would be able to obtain labour?

Mr. Bonington.—Not there but we can get labour from outside. There is a certain amount of local labour. Government are getting more and more

people to settle there. We can always get labour at 12 annas a day to 1 rupee a day.

Mr. Mathias.—There will have to be a regular supply of chemicals, paper and so on.

Mr. Bonington.—The Swedish Match people told me that there would be no difficulty about it.

Dr. Matthai.—How long ago were the Swedish people investigating into this question?

Mr. Bonington.—About a fortnight ago.

Dr. Matthai.—What is the present price of papita in Calcutta?

Mr. Bonington.—There was a contract at Rs. 48 a ton and the contractor refused acceptance.

President.—Their point was that the wood was not fresh when it came up.

Mr. Bonington.—It was fresh when it came up but it was lying there for sometime.

Mr. Mathias.—That makes a difference.

Mr. Bonington.—The question of freshness had not been brought home to me forcibly until I came to Calcutta this time. I think a little more attention will be paid to that if necessary.

President.—What is your arrangement with Messrs. Martin and Company? Is it an annual contract?

Mr. Bonington.—The last arrangement was as follows:—

“The Secretary of State hereby appoints the firm, and the firm will act as agents of the Secretary of State in Calcutta and deal with the sale of the whole timber outturn of the Andaman Islands”.

That was the old contract. It was renewed this year. The contract may be terminated on a year's notice—It was made out for five years and reads as follows:—

“The Secretary of State hereby appoints the firm and the firm will act as the agent of the Secretary of State in Calcutta for the sale of the outturn of Government timber from the Andaman Islands which is shipped to Calcutta except for re-export. It is hereby agreed that the Chief Forest Officer, Andamans, will make no direct sales for shipment to Calcutta.”

President.—They are getting this wood at about Rs. 37-8-0 and they are selling it at Rs. 60 per ton.

Mr. Bonington.—They are not getting Rs. 60. They have asked Rs. 60 for bakota.

Dr. Matthai.—Bakota is supposed to be better than papita?

Mr. Bonington.—Yes. When you hear Martins they will be able to tell you more about all this.

Mr. Mathias.—Do they use papita and dhup for any other purpose besides match manufacture?

Mr. Bonington.—Dhup is called white mahogany. It is put on the European market the prices range from 4s. 6d. to 5s. 2d. c.i.f. London papita is also used for packing cases and we ship it to some extent to Calcutta and it sells at Rs. 75 to 90 per ton.

Mr. Mathias.—Are you able to get that price?

Mr. Bonington.—Yes.

Mr. Mathias.—Why do you sell it for the match industry at a less price then?

Mr. Bonington.—Our present supply is more than the demand for planks, and another point is our milling charges are very heavy. The cost f.o.b. of planks would be about Rs. 60 per ton.

Dr. Matthai.—Are you sure that sawbys and papita are the same species?

Mr. Bonington.—I am not certain but I think they are very much alike.

Dr. Matthai.—We got a very good account of sawbya as match wood in Burma but there appears to be a different impression in Calcutta. Could you account for the difference in any way?

Mr. Bonington.—I just saw this morning the report of the Swedish Match Company and I got the impression that a high wastage was due to bad selection of logs. I don't think the factories here are organized for this timber which is of a very large size. I think the rotary machines are run at a high speed for small logs and are not suitable for the larger papita.

Dr. Matthai.—What is the average girth of papita you send to Calcutta?

Mr. Bonington.—7 feet 6 inches.

Mr. Mathias.—They complain that it cracks.

Mr. Bonington.—It does. As I say the selection has been bad.

Mr. Mathias.—We saw Messrs. Adamjee Hajee Dawood and Company's factory at Rangoon, and they were equipped to deal with very large logs, whereas the factories in Calcutta are not equipped to deal with logs much more than 6 inches in diameter.

Mr. Bonington.—Yes. There is no doubt that the equipment is not adequate. On reading through the report that is what struck me.

Mr. Mathias.—You have a contract with Adamjee's?

Mr. Bonington.—Yes.

President.—You have a contract with Adamjees for about 5,000 tons of timber?

Mr. Bonington.—Yes.

Mr. Mathias.—Are you supplying him regularly?

Mr. Bonington.—Yes. They wanted 3,000 tons of dhup and 600 tons of papita this year. I had also an offer from the Swedish people who were pressing me for a contract but Adamjees have treated us extremely well; they had the contract so long and therefore I thought it better to give it to them.

Mr. Mathias.—Did you have any complaints from Adamjees about the qualities of the woods?

Mr. Bonington.—Yes.

Mr. Mathias.—What is the kind of complaint?

Mr. Bonington.—That papita had often eccentric heartcentres.

Mr. Mathias.—That is common to all kinds of soft wood in India?

Mr. Bonington.—I do not know about that.

Mr. Mathias.—Had there been any other complaint?

Mr. Bonington.—Yes, about the measurement. They want timber with the bark on. It is difficult to measure the timber with bark and so we make a rough allowance, say of about 2 to 4 inches for the bark. They complained to me that they had received short measurement and wanted me to increase the bark allowance.

Log measurements.

Mr. Mathias.—Do you sell it by the 50 c. ft. ton excluding bark?

Mr. Bonington.—We sell it by happens measurement excluding bark? Happens measurement $1\frac{1}{4}$ girth (2). If I were to sell logs anywhere I would sell on measurement excluding the bark.

Mr. Mathias.—Is that common to all forest departments? The matter is rather important in this way that, as I have mentioned before, the wastage on Indian wood is greater than the wastage on aspen. The bark on the aspen is very thin. I was conducting experiments the other day and I found that the bark on the simul came to a very large amount. In the case of one log the bark came to as much as 128 lbs. So if the timber is sold excluding the bark the price compares very favourably.

Mr. Bonington.—I have always sold timber excluding bark. I have always given an allowance for bark, or I have measured the log under bark.

Mr. Mathias.—Your price in Calcutta would be excluding bark for which you make allowance?

Mr. Bonington.—Yes.

Mr. Mathias.—Roughly what sort of allowance do you make?

Mr. Bonington.—2 inches on dhup and 4 inches on papita.

Mr. Mathias.—Taking the price at Rs. 48 per ton, allowing for the bark what would it come to?

Mr. Bonington.—It depends on the measurement of the log. If you have a log of 7 feet girth that is 84 inches, you deduct 4 inches off that and calculate the price for a girth of 80 instead of 84 inches.

Mr. Mathias.—Taking the average log that you are selling, can you give us some idea as to how it would compare if you were selling it with the bark?

Mr. Bonington.—289 square inches against 324 square inches.

Mr. Mathias.—Do you mean something like 48 to 53?

Mr. Bonington.—Yes.

Mr. Mathias.—As compared with the genwa which is sold with the bark it comes to roughly Rs. 43 a ton.

Mr. Bonington.—Yes.

President.—This quantity that you have given here of 144 million cubic feet, is that the total supply just now in your estimation?

Mr. Bonington.—The Andamans contain about 2,500 square miles. I have only calculated on 1,500 square miles after eliminating the inaccessible areas.

Mr. Mathias.—I am talking of the accessible areas.

Mr. Bonington.—That is 1,500 square miles at 3 tons an acre—

Mr. Mathias.—That is mature wood?

Mr. Bonington.—That is timber over 4 feet 6 inches girth. If you allow a rotation of, say, 40 years, then the younger stuff would come again.

Dr. Matthai.—That is about 70,000 tons a year?

Mr. Bonington.—Yes.

President.—That you would consider more or less a permanent supply?

Mr. Bonington.—Yes. As I say considering the fact that I don't want to cut off all the soft wood you can reduce it by half: I can give you only an arbitrary guess I cannot give you any definite figure.

President.—What is the total quantity of hard wood at present extracted by Government and sold in a year?

Mr. Bonington.—About 30,000 tons of hard wood.

President.—You get a royalty of how much?

Mr. Bonington.—There is no royalty.

President.—You say about Rs. 15 per ton.

Mr. Bonington.—We have only the profit. Our profit last year was Rs. 1,40,000.

President.—If you reduced your price you would make much more profit than you are making at present.

Mr. Bonington.—I would very much like to get the trade but the only trouble is freight. I am anxious to get rid of the timber. If I only get people who will buy f.o.b. that is a different matter. The difficulty is about the freight. If factories are established in the Andamans I would supply them with timber at cheap rate fresh every day.

President.—There is no factory on this side at any rate which is big enough to keep its own steamer to bring its own supply of timber.

Mr. Bonington.—No.

President.—It may be that in course of time some big factory may be established which may run its own steamer from the Andamans.

Mr. Bonington.—Personally I don't think it would be economical.

President.—If you were sure that the wood supply could be ensured?

Mr. Bonington.—That could be ensured, but I think the running cost of the steamer would be too high. That is my opinion but it is a question for consideration by interested parties.

Mr. Mathias.—When the Swedish Match Company's representative was in the Andamans was the Company contemplating the establishment of a match factory there?

Mr. Bonington.—Yes, I asked them to do that. I asked Adamjees to come; I also asked another firm Messrs. Karimbhoy Shamshudin. The Swedish people are considering the question and they don't see any real difficulty.

President.—I think probably the feeling in the industry may be that it may not be possible to get regular supplies otherwise one does not see that the difficulty about getting freight is insuperable. That is the point on which you have got to satisfy the manufacturers.

Mr. Bonington.—I cannot settle that point. I can only deliver the timber at Port Blair. I cannot settle the point regarding freight; to me it has been insuperable.

Mr. Mathias.—Can you guarantee that you can deliver 30,000 tons at Port Blair?

Mr. Bonington.—Yes. That is with reference to Calcutta.

Mr. Mathias.—But you have a contract with Messrs. Martin & Co.?

Mr. Bonington.—We can deliver anywhere except at Calcutta.

Mr. Mathias.—Supposing the match manufacturers at Calcutta wanted to have 20,000 tons.

Mr. Bonington.—We can sell it through Martin & Co. and get over the difficulty.

President.—The contract with Messrs. Martin & Co. can be terminated?

Mr. Bonington.—Yes. I think Messrs. Martin & Co. would only co-operate. It makes no difference to them, and work will have to be done in Calcutta in connection with delivery.

Mr. Mathias.—Provided they get their commission of Rs. 1-8-0 they won't mind?

Mr. Bonington.—That is so.

President.—I don't know whether Messrs. Martin & Co. have got steamers of their own.

Mr. Bonington.—No. Supposing any firm wanted this timber we could supply them by simply giving Martin & Co., their commission.

President.—It is for you to impress upon Messrs. Martin & Co. that it is their business to arrange for regular freights.

Mr. Bonington.—They cannot get that when the steamship companies won't carry the timber at economic rates.

President.—They must charter a steamer. Take Calcutta for instance. You take 4 to 5 million as the present production of matches. That means about 40,000 tons of timber a year or about 3,000 tons a month. That would keep one steamer of the size of the Maharaja or a little bigger steamer going the whole time.

Mr. Bonington.—Supposing the Maharaja carries 2,000 tons a month or 24,000 tons a year, or even 30,000 tons a year, what freight rate would you propose?

President.—According to your figures if you take Rs. 6 as royalty the freight will be about Rs. 17 a ton to bring the price up to Rs. 40 ex-ship.

Mr. Bonington.—That is about Rs. 5 lakhs a year.

President.—That is not a small sum.

Mr. Bonington.—The cost of the Maharaja comes to about Rs. 6,99,000. If it is run by a private company probably it will be less.

President.—If Messrs. Martin & Co. or anybody else could guarantee in conjunction with you that 3,000 tons per month could be landed here of this quality of wood, then the difficulty about freight does not seem to be very great.

Mr. Bonington.—If the people who want to buy soft wood could arrange for the steamer I could do the rest. I have found difficulty in arranging with the steamer company to carry the wood at a reasonable rate.

Mr. Mathias.—How do you get your labour in Port Blair?

Mr. Bonington.—In the South Andamans we have a certain number of volunteer convicts—people who volunteered from the Burma Jails—and we engage a certain number of free people from Ranchi in the North Andamans.

Mr. Mathias.—You don't find any difficulty, do you?

Mr. Bonington.—The difficulty is that they don't stay long enough.

Mr. Mathias.—What about the forest labour?

Mr. Bonington.—That is forest labour. About mill labour we have no difficulty.

Mr. Mathias.—Why no difficulty as regards mill labour?

Mr. Bonington.—People always like to work under sheltered condition.

President.—Are they convicts?

Mr. Bonington.—Convicts and also free labour. I also get some local people.

President.—What is the population of Port Blair?

Mr. Bonington.—About 20,000.

President.—Does the imported free labour remain there?

Mr. Bonington.—The Ranchi people go back. They come on a year's agreement. They have land in Ranchi and they like to get back for the sowing season. They often come to the Andamans in order to be able to pay off their debts to the money-lenders. That is one of the reasons.

President.—For factory labour you must have steadier labour than that.

Mr. Bonington.—We have got a good number of labourers from different places in India. They stay there. The Bengali launch crew stay there all their lives. We have no trouble. I don't think that any private concern will have any difficulty about labour. There used to be when Port Blair was entirely a convict settlement but it is practically a convict settlement no longer.

Forest Research Institute, Dehra Dun.

A.—WRITTEN.

(1) *Letter No. 396/37, dated 18th January 1927.*

With reference to your letter No. 39, dated the 5th January 1927, I have the honour to enclose herewith copy of a Memo. No. 1/2208/M.F.P., dated the 15th January 1927, by the Forest Economist on the subject and to enquire if you would like this Institute to prepare a further note on this subject. If so, please intimate the latest date this note should be in your hands as it will be necessary to carry out some enquiries.

Copy of Memo. No. 1/2208-6/M. F. P., dated the 15th January 1927, from the Forest Economist, Forest Research Institute and College, to the President, Forest Research Institute and College, Dehra Dun.

I give below such information as is available on the enquiry made by the Secretary, Tariff Board.

1. Subsequent to the publication of the "Prospects of the Match Industry in the Indian Empire" by R. S. Troup, further researches have been carried out, in a small way, by this Institute, into the question of the fitness of Indian woods for the manufacture of matches.

2. In the first place, a record has been made of the opinions expressed by manufacturers of the suitability of species which they have tested in this respect and consignments of timber have from time to time been sent to Match factories for report as to their suitability for splints and boxes.

3. Arrangements have also recently been made to supply trial logs of different species to a firm in Bombay who have agreed to report on their suitability for match making.

4. As regards other work in this connection, I would draw the attention of the Board to Bulletin No. 12 "Report on the investigations into the possibility of Match Industry in Bihar and Orissa" by A. P. Ghose, M.S.C.I. (Lond.), issued by the Department of Industries, Bihar and Orissa.

The veneers and match splints of the species tested under this investigation are now in the Museum of this Institute and can be seen by the Board if they so desire.

5. The Government of Bihar and Orissa have recently instituted a match factory at Gulzarbagh and in this factory are being tested the various timbers which have been suggested as suitable in the above publication.

6. The Wood Working Institute, Bareilly, has also installed match machinery with the idea of trying out the timbers available in the United Provinces and encouraging match making as a cottage industry.

The results of the tests made at these two institutions might prove of value to the Board.

7. A factory in Lahore was also started some two years or more ago with the help of the Chief Conservator of Forests, Punjab, with the object of using coniferous timbers for match making. As this was the first and only attempt made in India, to use coniferous wood, the results may be of interest to the Tariff Board.

8. In addition to the above I would also suggest that the Board address the various match factories in India and obtain their opinion on the species which they have tried and their experience as to the availability of supplies.

9. This Institute would be pleased to draw up a note on the information it has collected during the past five years or so concerning the Match Industry in India and the conclusions drawn from its observations on this Industry, for submission to the Board or to give evidence should the Board so desire.

If such note is required I request you will kindly let me know the latest date by which it can be submitted as it will be necessary to carry out some enquiries before it can finally be drawn up.

(2) *Letter dated the 11th April 1927.*

In compliance with the request contained in your letter No. 108, dated 20th January 1927, I have the honour to forward herewith copy of a note by the Forest Economist on the Match Industry in India with special reference to the use of Indian timbers.

Note for the Tariff Board on the information collected by the Forest Research Institute, Dehra Dun, on the Match Industry in India, with special reference to the use of Indian timbers.

An enquiry into the existence of indigenous timbers in India suitable for match making was started as far back as 1893. Much the same timbers were then tried as are now being considered. Of these the outstanding woods were spruce, silver, fir, *semul* (*Bombax malabaricum*) and *geon* (*Excaecaria Agallocha*.)

2. In 1897 the Bengal Assam Safety Match Manufacturing Company used almost only *geon*, even as to-day the Karimbhoy Shamsuddin Match Factory in Calcutta does. Early in the 20th century spruce and silver fir were sent home to a certain match manufacturer in England for trial. The former was reported to be suitable and the latter unsuitable, but it was stated that the factory concerned did not consider it advisable to take up match manufacturing in India at that juncture.

3. *Semul* has been used for many years in most of the factories in India; it is not a good timber for match splints though it is suitable for boxes.

4. In 1910, Professor Troup, the then Forest Economist at the Forest Research Institute, Dehra Dun, wrote his Indian Forest Memoir on "The Prospects of the Match Industry in the Indian Empire." This contained a large amount of useful information of which some has, however, in the light of further experience been proved to be mistaken. The year before this Memoir was written a variety of Indian timbers had been collected and sent to Germany for trial for matches. These were sent to the makers of match machinery, who proved to be human in that they consider their own interests before strict accuracy, and reported as eminently suitable for making into matches, by their machinery, many timbers that are not so.

5. This comparative perfidy was not suspected by the officials in India and in Professor Troup's Memoir, these reports were given credence which they did not deserve, with the result that certain timbers were recommended to be suitable for the purpose under consideration which were not so.

6. I give below a list of Indian timbers which have, at one time or another, been reported as useful for match making, by actual manufacturers in India, but it must be borne in mind that experience has shown that a timber which in one locality is considered to make a good splint in another is reported as being only useful for boxes, and again the same timber from the same locality is sometimes reported by one maker to be satisfactory and by another in the same town to be unsatisfactory for the purpose in view. I have remarked below on those woods as to the suitability in view. I have remarked below

on those woods as to the suitability of which there now seems to be little doubt.

List.

Species.	For splints.	For boxes.
<i>Bombax malabaricum</i> (semul)	poor	good
<i>Bombax Insigne</i> (didu)	"	"
<i>Emelina arborea</i>	...	fair
<i>Sterculia campanulata</i> (papita) (probably the Shawbya of Burma)	fair	good
<i>Spondias mangifera</i>	"	fair
<i>Excoecaria Agallocha</i> (geon)	good	good
<i>Albizzia stipulata</i>	"	"
<i>Mangifera indica</i> (mango)	very good	...
<i>Populus euphratica</i> (river poplar)	fair	good
<i>Populus ciliata</i> (hill poplar)	"	...
<i>Lophopetalum Wightianum</i>	good	good
<i>Holigarna Arnottiana</i>	fair	fair
<i>Trewia nudiflora</i>	"	"
<i>Stereospermum chelonoides</i>	"	"
<i>Sarcocephalus cordatus</i> (probably the Mau-lettian-she of Burma)	"	"
<i>Odina Wodier</i>	...	satisfactory
<i>Alstonia scholaris</i>	fair	fair
<i>Boswellia serrata</i> (salai)	"	"
(Though a poor timber for the purpose is liable to be used considerably in the future owing to its prevalence and the fact that it grows in almost pure forests within reasonable distance of Bombay)		
<i>Buchanania latifolia</i>	fair	...
<i>Symplocos</i> spp.	good	...
<i>Pinus excelsa</i> (blue pine)	very good	...
<i>Picea Morinda</i> (spruce)	good but difficult to work.	...

7. Again an outstanding feature of this difficult question is that a timber may be reported by, let us say one of the factories controlled by the Swedish Match Co. as being poor, whereas it may be stated by one of the Indian factories in, let us say Calcutta, to be good. The point is that in all probability the one manufacturer is comparing it with imported Aspen, which he uses almost exclusively for splints, while the other is comparing it with an Indian timber, such as *Semul* which he may have been using almost exclusively in the past.

8. There is little doubt however that there is not a timber in India produceable at a competitive price, if indeed one exists at all, that can be compared with Aspen for making splints and that therefore if a first class match is to be made in this country it will have to be of imported timber. It is possible of course that during the search for such a timber, that has now lasted for over 30 years, a suitable timber which does exist has been overlooked, but this is unlikely. And it is reasonably certain that no such timber does exist in sufficient quantities to be of any immediate use as a substitute to replace Aspen entirely.

9. There are indeed many Indian timbers from which matches can be made, and these matches are good enough for all practical purposes, but

even so they cannot at present be delivered in sufficient quantities or with sufficient certainty for it to be anything but dangerous to the industry as a whole to attempt to do without imported Aspen. There are certain factories that even now do claim to use only Indian timbers, but these are usually specially placed with reference to supply and cannot be taken as general examples. I refer to such factories as Karimbhoy Shamsuddin's in Calcutta, which gets its supplies of *geon* (*Excaecaria Agallocha*) from the Sunderbans at unusually cheap rate, Adamjee Hajee Dawood's in Rangoon which gets reasonably priced timber from the Burma and Andamans forests, and to certain North Indian factories which use only Indian timbers owing to the fact that they would have to pay railway freight on timber imported at any sea port.

10. It is therefore clear that imports of Aspen and other suitable timbers will have to continue until a sufficiently reliable supply of Indian timbers becomes available for ordinary matches, and that even when that stage has been reached Aspen will still be necessary for the manufacture of what may perhaps be termed the luxury match.

11. At present the supply of Indian timbers falls far short of the total demand.

12. There are two major difficulties in the way of making the supply; the first is that the timbers which are suitable do not grow in pure forest but are scattered amongst a number of other miscellaneous species; this greatly increases the cost of extraction and renders the price that must be paid for the timber excessive; and the second is that a great part of the suitable timber grows in inland forests from which the only lead to the factory is by railway on which freights are excessive, whereby again the cost of the timber is raised.

13. The solution of the difficulty is for the match factories to make plantations for themselves of the timbers they wish to use. This involves a wait of anything from 7 to 12 years before their supply is assured and also a considerable outlay of capital.

14. Therefore, unless the industry is assured of protection from unfair competition for a number of years, it will obviously not be possible for individual manufacturers to go to the length of making such plantations.

15. Again it cannot be said that the best type of timber to be planted for this purpose has yet been finally decided, and it would seem strongly advisable that the Forest Department in the various provinces in which match manufacturing is of importance, should without delay start experimental plantations with the object of showing that suitable timbers can be grown in a reasonably short space of time, and at a reasonable cost. In Bihar and Orissa such plantations have, I understand, already been started under the auspices of Mr. Nicholson, the Forest Research Officer of that province, and their example might well be followed by other provinces. Similar plantations might also with advantage be initiated at the Forest Research Institute, Dehra Dun.

16. In the meantime investigations are proceeding, at the Economic Branch of the Forest Research Institute, into the suitability of various timbers for match making. More especially at the moment, is the possibility of rendering spruce and silver fir fit for splints occupying our attention. The supplies of these timbers that can be made available are so great, amounting as they do probably to many thousands of tons per annum, that the matter of utilising them is one of considerable importance; further, the owners of the forests which contain spruce and silver fir are anxiously seeking a market which does not at present exist for these species.

17. The difficulty of utilizing them lies largely in the fact that the timber when dry is too hard to cut cleanly on a rotary veneer. The time that elapses between felling and delivery at any existing factory in the plains is somewhere between nine and eighteen months, during which time, even though water-borne spruce and silver fir dry out. Soaking and boiling in water have both been tried without success and now experiments in boiling the timber *under pressure* are being carried out in the hope that sufficient penetration will thus be obtained to render it workable.

18. If this is not successful it is possible that the solution of the difficulty will lie in the erection of special factories for cutting splints and veneers in the forests, immediately after felling, while the timber is still green. These splints and veneers would then be distributed to various finishing factories in the plains.

19. Were such factories to be instituted on a large scale they would probably supply all the requirements of North India but it is questionable if the railway freight would not make it impossible for them to compete with imported timbers further south. One company, in the Central Provinces, is already considering the installation of portable splint mills in the forests so as to economise in cost of supplies of splints and veneers.

20. There is one of the Himalayan conifers of which there are large supplies which is certainly suitable for making splints and that is *kail* (*Pinus excelsa*). But there is already sufficient demand for this timber to make the price prohibitive for competitive working.

21. From the statistics available to the Tariff Board, it will be easy for them to see the extent to which the match industry has grown in India during the past few years, that is to say since the imposition of the import duty on matches and, again, of the further duty on match splints and veneers.

22. There are a large number of factories now situated in various parts of India and working, in the main, at a small profit. The Japanese trade in matches has almost died out though incidentally, the imports from Europe have to a certain extent correspondingly increased.

23. Match manufacturing is therefore extending in India, and various examples of the proposed erection of new factories or the extension of existing ones have come to my notice in the past few months. There can however be no real advance in this industry until the commercial public feel secure, and there is little doubt that there are combinations in the world strong enough to break, should they wish to do so, the industry in this country, if it is not assured of the continued support afforded by the import duty.

24. The advantages to India of the industry are obvious, involving continuous employment for a large number of workmen and women the retention of capital in the country, and the utilization of large quantities of more or less valueless timbers belonging to both private owners and the State.

25. Apart, however, from any such support as may be given by an import duty there is one way by which the Indian match manufacturer can help himself, and this point needs emphasis. There is no doubt that a large number of matches made in India by Indian companies are not up to the standard of those made in India by foreign companies or imported from Europe. The difference is not only that of the timber used but is also largely the composition of which the heads are made, and the fact that the dipping is badly done or is so constituted as to be ineffective during the monsoon. The principle of self-help is a very old one and it should be a condition of continued support from Government that Indian match manufacturers should help themselves and prove their efficiency by showing that they can produce as good as match in India as any one else. The firmly established prejudice against a match with a coloured splint, which exists in the minds of the public, undoubtedly owes its origin to the fact that originally practically all the discoloured matches that were sold were of Indian manufacture and they were so badly made that many of them did not ignite when struck. The public thus arrived at the conclusion that a match with a white splint which was an imported match, was preferable.

26. The conclusions I would draw therefore are as follows:—

- (1) That it would seem advisable to retain or possibly increase the present duty on imported matches, imported splints and imported veneers.
- (2) That no special duty should be imposed upon the import of timber in the log for the manufacture of splints and veneers in India, at all events until such time as a sufficient supply of indigenous

timbers is made available for the manufacture of all but luxury matches.

- (3) That the formation of plantations of match timbers by single factories or groups of factories should be encouraged by such means as special grants of land, advice as to species and methods of planting, etc.
- (4) That, further, experimental plantations of timbers considered suitable should be made by the Forest Departments of the various provinces interested, and also by the Forest Research Institute at Dehra Dun.
- (5) That special facilities and necessary financial support should be given to the Forest Research Institute at Dehra Dun for the purpose of extending their investigations into the suitability and availability of match timbers indigenous in India.
- (6) That the advisability be considered of establishing a Government factory in the Himalayas for the purpose of making and distributing splints and veneers of spruce and silver fir to various factories in the North of India, provided first that the possibility of cutting spruce and silver fir on a rotary veneer while yet green be fully established.
- (7) That it is essential if the industry is to attain a really healthy condition that the Indian manufacturer should not indulge in any false economy in the matter of quality and quantity of his dip, and should take every precaution to see that he produces as good a match as does his European competitor in India. It is of course recognized that certain Indian manufacturers already work up to this standard, but to kill the prejudice against Indian matches it is necessary that all should do so.
- (8) Seeing that there is a real difficulty in the matter of supply of timber for match making those interested should be strongly advised to consult the Forest Department as to the possibility of getting their requirements of timber *before* they take any active steps in the matter of establishing new factories in any particular localities. We frequently have demands made on us for supply of match timbers after the erection of the factory has become an accomplished fact, in a locality within reach of which no such timber grows.

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- (3) *Copy of letter from Mr. A. Rodger, O.B.E., Inspector General of Forests and President, Forest Research Institute, Dehra Dun, to the Tariff Board. No. 65, dated the 14th January, 1928.*

As requested by the Chairman on the 9th January at Dehra Dun, I have the honour to send you my remarks on the problem which I understand the Tariff Board is investigating, that is, the possibility of making India (including Burma and the Andamans), as far as possible self-supporting in the matter of timber for the manufacture of matches.

2. The Tariff Board will understand that we have at present little reliable information regarding the growth of forest trees in India which produce wood suitable for matches, either in the mixed deciduous forests from which the greater part of the present supply is obtainable, or in plantations. Nor can we at present give them any figures regarding the quantity of wood suitable for matches at present standing in the forests. Burma has supplied some figures, and it may be noted that the quantity estimated to be available per acre is not large, and this may, I think, be fairly assumed to represent the state of affairs over the greater part of our forests.

3. It is unnecessary to analyse in detail the reports which have been supplied to the Board by Local Governments and by forest officers, but the general impression left by their perusal is that the amount of informa-

tion available is quite insufficient to enable the Board to put forward definite proposals regarding the utilisation of existing stocks of timber by manufacturers of matches. I think therefore that the first thing to do is for the Government of India to arrange that a survey of existing stocks of suitable timber should be carried out by a forest officer to be placed on special duty. The co-operation of the provincial Governments should be invited, but it would be advisable that the work should be under the direction of one experienced forest officer. His duties would be to examine all the accessible forests where reasonable quantities of match woods exist and his report should summarise information for each forest under heads of this nature:—

- (1) Estimate of quantity of each suitable timber available.
- (2) Means of export by road, river, and rail and quantity of timber which could be delivered annually.
- (3) Cost of delivery per ton of 50 cubic feet at a large port or at a suitable centre where matches are, or could be made.

I think that a capable officer if placed on special duty could complete his task in three years, and the cost would be approximately Rs. 75,000 allowing Rs. 1,500 per mensem for his salary and Rs. 500 for his travelling allowance. In addition to this, provinces could be asked to supply assistants and subordinates to carry out enumerations under the direction of the officer in charge. His procedure would be to visit provinces in rotation as soon as possible and arrange with the local head of the forest department for the necessary enumerations to be started. When this work had begun, his duty would be to spend as much time as possible in the forests, supervising the enumerators and examining as many forests as possible himself. He should be under the orders of the Inspector General of Forests. I think it is quite possible that we might arrange that Government should not be liable for the whole of the cost.

4. There is another matter which has come before the Board, and that is, the formation of plantations to ensure an adequate supply of timber in future. It may be advisable again to lay emphasis on the great economy that would result if we were able to obtain supplies from accessible concentrated areas, instead of from large scattered forests. In view of the extremely scanty data regarding plantations of soft woods at present at our disposal, it is inadvisable for us to be sanguine about outturn but it seems that a Semul plantation about 30 years old if properly tended might be able to produce about 50 tons of timber per acre. Forest officers of experience appear to agree that the Semul tree (*Bombax malabaricum*) will grow to seven feet girth in 30 years. What I should like to see would be the establishment as soon as possible of large areas of experimental plantations of suitable species, on suitable localities, in the United Provinces, Bengal, Bihar and Orissa, Madras and Burma. The measures to be undertaken in this direction by provinces could be decided upon by the local officers in consultation with the Forest Research Institute at Dehra Dun.

5. There is another point which is of importance and that is, the provision of reliable data regarding the suitability of Indian woods for matches. This could be dealt with by the Forest Research Institute in association with match manufacturers. I am inclined to recommend the following woods for exhaustive examination to begin with:—

Bombax malabaricum.
Sterculia of several species.
Anthocephalus Cadamba.
Sarcocephalus Cordatus.
Kydia calycina.
Duabanga sonneratioides.
Populus (two species).
Trewia nudiflora.
Himalayan conifers.

Probably others would be selected later.

6. To summarise my proposals:—

- (1) A survey of the existing stocks of match woods should be undertaken.
- (2) Experimental plantations on a large scale should be made.
- (3) All likely woods should be subjected to expert examination.

7. I forward herewith a copy of a note (with photograph) written by me in 1916. This indicates that 1,300 cubic feet of jungle woods per acre can be produced naturally in seventeen years in Burma.

Enclosure.

Forest growth on old shifting hill cultivation, by A. Rodger, I.F.S.

The problem of how to replace the forests destroyed by *Taungya* cutters is always of interest, and the accompanying photograph shows a first rate example of what nature can do unaided in its solution. This wood was seen in the Prome district in unclassified forest at an elevation of about 500 feet on the outer skirts of the Pegu Yomas, on the *Toithlagyaw* to the north of the village of Ngashinkwin. The slope was moderate, the soil fairly good loam and bamboo (*Dendrocalamus strictus*) was scarce in the neighbourhood. The area had been cut over 17 years before and the photograph was taken in December 1915, by which date the ground had been largely occupied by good dense pole growth. Three countings were made and the following figures obtained:—

Number of stem per acre	1,150
Timber down to 2 feet girth: cubic feet per acre	165
Small wood: cubic feet per acre	1,108
TOTAL	1,273

The volumes were calculated from sample trees of all sizes which were felled. Seventy-four per cent. of the trees were below 1 foot in girth and the largest measured 3½ feet in girth at breast height *Stephegyne diversifolia* (Binga) formed 72 per cent. of the total crop and almost all the stems of this species measured less than 14 inches in girth. The species coming next in numbers were *Hymenodictyon excelsum* (Kuthan), *Bombax insigne* (Didu) and *Berry Ammonilla* (Petwun) but there were only 25 of the last named per acre. There was also a sprinkling of *Erythrina* sp., *Odina Wodier*, *Spondias mangifera*, *Lagerstrœmia villosa* and a few others. The number of stems and volume per acre compare quite well with the same figures for a carefully tended teak plantation in the neighbourhood, 13 years old, in which there were 690 stems and 1,385 cubic feet of small wood per acre.

(4) Copy of letter No. 84, dated the 18th January, 1928, from Mr. A. Rodger, O.B.E., Inspector General of Forests, Dehra Dun, to the Secretary, Tariff Board.

In continuation of my letter No. 65 of 14th January, 1928, I have the honour to forward for information a copy of Forest Economist's note dated 16th January, 1928.

Copy of Forest Economist's note dated 16th January, 1928.

Green logs of Himalayan Spruce (*Picea Morinda*) and Silver fir (*Abies Pindrow*) were obtained from Chakrata Forest Division and they were peeled on

arrival to determine whether they would peel successfully when green. Although not absolutely green when put to the lathe, they peeled fairly well though interlocking of the fibres was noticeable, especially in the Silver Fir.

2. Experiments were also carried out to ascertain whether it would be possible to peel dried logs of Himalayan Spruce and Silver fir after boiling under pressure. These experiments were not very successful, as the logs peeled were badly fungus attacked, causing them to break up while being peeled. The boiling under pressure also appeared to weaken the wood along the annual rings.

3. Arrangements were also made for certain Provinces to make free supplies of the following timbers to Messrs. Abdoolabhoy Laljee and Co. who tested them at their match factory at Andheri and furnished us with results of the tests :—

Alstonia Scholaris, *Anthocephalus Cadamba*, *Gmelina Arborea*, *Odina Wodier*, *Schima Wallichii*, *Albizia stipulata*, *Bombax insignis*, *Sterculia alata*, *Trewia nudiflora*, *Buchanania lancifolia*, *Vateria indica*, *Sterculia campanulata*, *Albizia molucanna*.

4. All reports received to date on species tried for match making have been collected and set out in a statement, so that it is now possible to see at a glance the reports received from different sources as to the suitability of any species for match manufacture. The reports as usual are very conflicting.

5. The Swedish Match Company have offered to lend us a veneer and splint chopping machine to enable us to carry out experiments. The offer has been accepted and the machines are expected to arrive before long, when it will be possible to test species at this Institute for suitability for match manufacture. This is the only satisfactory method of dealing with this question of suitability of Indian timbers for matches.

(5) Letter No. 127, dated 25th January, 1928.

In continuation of my letter No. 84, dated January 18th, 1928, I have the honour to send herewith a copy of a report dated January 18, from the Deputy Conservator of Forests, North Kheri Division, United Provinces, which I hope will be of interest to you. The areas referred to will probably be of value for experimental *Bombax* plantations. 7 means that the area is stocked with about 7-10 of the number of trees that it could carry. Phantas are open grassy areas in sal forests.

Copy of a report dated 18th January, 1928, from the Deputy Conservator, of Forests, North Kheri Division, U.P.

The experience gained in plantations in the low alluvium of North Kheri division is that semul is easy to start off but that it suffers very badly from frost (for the first 5 or 6 years) and browsing by wild animals (for the first 2 or 3 years). Our fences are proof against cattle but not against game. The earliest sowings were done in 1922 and the best plants are now about 10 ft. high but the average of all the survivals of that year I should say is not more than four or five feet. The biggest ones (9 or 10 ft.) I consider are now just about out of frost danger (4-5 ft.) still get cut back by frost every year. Like teak however most of the plants cut back by frost send up a slightly bigger shoot the following year, but whereas teak appears to get more or less out of frost danger (about 10 ft.) after being cut back annually for four years it appears to take semul at least six years to do so.

In a non-frosty area I consider semul would be an easy species to raise from sowings, and semul plantations I consider can be made a success even in a fairly frosty locality though here it is a slower process. But it must be emphasized that in the North Kheri Low Alluvium the majority of the plants are not out of frost danger after 6 years, and it is too early to say yet definitely that success can be assured on a large scale. Sowings must be weeded for two years at least.

The low alluvium plantations in North Kheri have been discontinued on a large scale since last year as results were very patchy with all species and we are at present concentrating on small scale experimental work with different species and methods of soil preparation pending the revision of the Working Plan.

Semul sowings were discontinued from 1924 as the species was considered of too small importance economically to warrant its introduction in plantations, but this view I consider now requires revision. I am going to experiment with semul root and shoot cuttings this year as I have some nursery plants.

I might mention here that in the old Sarota phanta plantation made about 20 years ago in a frosty area semul is the species which has done best, (better even than sissoo). The surviving trees (and the stocking is fairly good, say 7) and the trees are roughly about 9 inches diameter and about 30 ft. high. I am speaking from memory. The semul occupies the best drained part of this plantation. Other species were put out in waterlogged areas.

Generally speaking I regard semul as one of the most promising species of any which have been tried in plantations in North Kheri both in the low alluvium and in the well drained parts of the interior phantas.



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FOREST RESEARCH INSTITUTE.

B.—ORAL.

**Evidence of Messrs. A. RODGER, H. TROTTER, F. D. ARDAGH
and Dr. J. N. SEN, recorded at Dehra Dun on Saturday,
the 21st January, 1928.**

Introductory.

President.—Mr. Rodger, you are Inspector-General of Forests and President, Forest Research Institute and College?

Mr. Rodger.—Yes.

President.—Mr. Trotter, are you the Forest Economist?

Mr. Trotter.—I am the Assistant Forest Economist.

President.—Mr. Ardagh, what are you?

Mr. Ardagh.—I am the Officer-in-charge of the Minor Forest Products Section.

President.—Dr. Sen, you are in charge of the chemical branch of the Institute?

Dr. Sen.—I am the Bio-Chemist.

President.—When did this combination of two offices—that of Inspector General and President—begin?

Mr. Rodger.—It began from April 1926.

President.—One office must to some extent interfere with the other?

Mr. Rodger.—I don't know—I find a fair amount of time for touring.

President.—Do you find the combination convenient from the administrative point of view?

Mr. Rodger.—Yes.

Research.

President.—I want to know first of all what arrangements you have here for carrying on research—I confine myself now to matches and soft woods required for this industry.

Mr. Rodger.—We have not done very much in that direction. Of course I was on leave most of last year.

President.—What sort of equipment have you?

Mr. Trotter.—We have no equipment at all except the veneer peeling machine. At present we can only tell whether a particular wood can be peeled on the veneer machine or not. In the past, what we have done, with reference to matches, is to collect all the information we could from manufacturers all over India and from that we have made a consolidated list of the various timbers used in India and the reports on them. But actually, we have done no research work except peeling of veneers, up to date.

Mr. Mathias.—You have only one peeling machine?

Mr. Trotter.—We have only one rotary veneering machine at present, but we have actually on rail coming up from Bombay, a splint peeling machine and a chopper.

President.—You may have collected a lot of information from outside but from the research point of view that information can never be as accurate and reliable as information collected by yourselves after your own examination of the problems and materials?

Mr. Rodger.—That is quite true.

President.—I am only just pointing out that that any research work done has been carried on by interested parties and the results obtained in that way can never be satisfactory. Have you put up any proposal to the Government of India as regards equipment?

Mr. Trotter.—We have now got these two machines coming; they are on rail.

President.—Even so, that equipment will hardly be adequate if you are really to carry out experiments because there are further processes after the chopping and cutting where the quality of the wood has to be tested, for instance box making.

Mr. Trotter.—There is no great difficulty about box making, is there?

President.—Take paraffining for instance. It is important to find out whether that particular wood does absorb the necessary quantity of paraffin?

Mr. Mathias.—In box making also the quality of the wood is of considerable importance. We find in box filling some woods are inclined to split if there is too much pressure in putting the matches into the box. A machine suitable for aspen may not be suitable for simul.

Mr. Trotter.—I take it that you consider that we should have a full equipment?

President.—I should think so. If I were conducting the Institute I should insist upon that.

Mr. Rodger.—We are getting the equipment for most of the research work as fast as possible and the economic branch is expanding very rapidly.

Dr. Matthai.—What we mean is that you should conduct experiments somewhat like the experiments you carry out on the ply wood plant.

Mr. Trotter.—It is a matter of money and a matter of men and we have to go slowly. We are making a start with the splint peeling and chopping machines, but if it is considered that that work is of no use without the rest of the machines, it is up to us to get the complete outfit as soon as we can.

Mr. Rodger.—Certainly. We would be helped in that direction by the recommendations of the Tariff Board.

President.—The Tariff Board, if it makes any recommendation for the organization of this research, will make recommendations which will more or less cover the whole ground.

Mr. Trotter.—Yes, that is the ideal, but it costs money.

President.—Have you got any mechanical expert who understands machinery?

Mr. Trotter.—Yes, we have a Mechanical Engineer, but not a match machinery expert.

President.—The point is rather important in this way—when you carry on experiments you will probably find the same thing—that this machinery is specially used in the manufacture of matches from aspen wood which has got certain characteristics; it is hard, clean, and so on. Our woods so far don't possess all these qualities and therefore a slight alteration in the machine might make all the difference in the use of the wood.

Mr. Trotter.—Yes, I agree. We find the same thing in other spheres of our work. For instance, a sawing machine which is perfectly capable of sawing European or American woods is very often unsuitable for Indian hard woods.

President.—Unless you had a small complete unit which possessed all the latest machines your research would not be reliable. A small unit does not cost very much.

Mr. Rodger.—Do you mean a small unit such as we have for the paper pulp?

President.—Yes, and then you can say that it is this machine which breaks the boxes in a certain part of the process—in the revolution or anything like

that—and from that point of view it is very important that anybody who carries out this research must be fully equipped.

Mr. Mathias.—The number of revolutions per minute in the box making might vary according to the kind of wood you are using. You might get better results in the case of some wood than in the case of others.

Mr. Trotter.—I quite agree. What you are talking about is the ideal, but in the present circumstances we could not do that; we would require a separate Section and a separate officer to do that.

President.—We are now trying to think out a complete scheme.

Mr. Rodger.—We will put up a complete plant and run it if we get sanction for it.

President.—We find the same thing in the case of box filling. If the boxes open more or less completely, the splints can be dropped in without pressure, but in the Swedish machine the boxes are partially open and the splints are forced in; the result is that the Indian wood does not stand the strain to the same extent as aspen does. Possibly the machine requires a slight alteration.

Mr. Rodger.—Yes.

President.—Have you seen the Bareilly plant?

Mr. Trotter.—No.

President.—Personally I think it is the best equipped plant that we have just now in the country.

Mr. Mathias.—It is Roller's machinery.

President.—It is the smallest unit of that kind but it certainly is most up to date. Of course you need not have a Simplex but if you had a couple of box making machines, one filling machine and things like that, I don't think the cost would be very much.

Mr. Trotter.—Does the Board consider that the research justifies the expenditure involved?

President.—You cannot carry out research without it. The research would not be worth anything unless you have the proper equipment. You must have at least one machine of each kind to carry out research. Then, from the forest point of view we think that if the work is to be properly done the Institute should have a special officer-in-charge of this forest research as regards wood in the Institute itself.

Mr. Rodger.—You mean an officer-in-charge of the experimental work on wood?

President.—Yes, and also you must have some match expert actually under his control to carry out experiments as regards the technical part.

Mr. Rodger.—We have got four of these experts now.

Dr. Matthai.—They are experts in particular industries?

Mr. Rodger.—Yes.

President.—So much the better.

Mr. Rodger.—I think you want for the match industry an expert exactly on the same lines as we have for the others?

President.—The point is that it should not be left to a man who cannot do anything like actual research work. It must be left to a man who is a match expert, who can tell you that this is the thing that breaks the box, for instance, and this is what ought to be done, and then the forest officer must be in charge of research as regards the suitability of wood. He will have to collect all information from the various provinces and the Andamans wherever the wood happens to be. That information must be collected by him as the central authority, that is apart from any research work that you may carry out in the forest itself. It is important that research should take place here on wood selected by forest officers:

Mr. Mathias.—And the date of cutting should be recorded.

Mr. Rodger.—We have all the arrangements for that in the other departments on a large scale. We take the wood, date, and name it, and, in order to be sure that the wood is properly named, it is botanically identified.

Mr. Mathias.—The date of felling is most important.

Mr. Rodger.—Yes.

President.—Up till now research has been unsatisfactory, and we have got different results as regards the same wood because you do not know when the wood had been felled, how long it has remained in the forest, under what conditions and so on.

Mr. Rodger.—All that could be done by the provincial forest authorities quite easily.

Mr. Mathias.—But they require some supervision.

Mr. Rodger.—They would.

Mr. Trotter.—We already have Collector's forms and instructions for logs used in Timber Testing and whenever a log is collected for testing, full particulars are entered up in the forms at the time the log is felled. It would be easy to have a similar arrangement for logs felled for match research.

Mr. Rodger.—We could get out a Project. Each section in the Economic Branch has a Project, in which the work is laid down to be done for so many years ahead on definite lines. We could get out a Project for the match industry on the same lines as for timber testing and things of that sort.

President.—The point is this. We have been told that certain kinds of wood ought to be green and that they should be fresh. That is really a matter of degree, is it not?

Mr. Rodger.—Yes.

President.—What we would like to know is this. If you get wood absolutely fresh from the forest and make splints from it, it will give different results than if it is used after it has been kept some time. What we have to ascertain is the maximum period for which timber can be stored without losing its quality.

Mr. Rodger.—Before you peel it?

President.—Yes.

Mr. Rodger.—We can tell that. We have a large trained staff who spend their time in deciding the question of moisture in timber.

President.—A theoretical test of moisture in timber may not give us such accurate results as the actual result of peeling.

Mr. Trotter.—We would keep a strict record of the moisture content of each log peeled and from that you could get very accurate information, as to the relation between the degree of moisture and facility in peeling.

President.—I was merely suggesting that it would be just as well to be able to say something on these lines—two months after felling or four months after felling, or 8 months after felling as the case may be.

Mr. Trotter.—That would all be recorded but the results would vary considerably, depending on the species and also on the locality when the log was stored. In a wet locality it would dry out much more slowly than in a hot dry place and so on.

President.—Take Burma and India. The position in these two countries is absolutely reversed as regards the extraction of wood. In Burma you can get out the wood in the monsoon whereas in Bombay and other places you cannot do that. That is a very important factor. In one place you get fresh wood in the monsoon whereas in the other place you get fresh wood in the cold weather. That is what is happening just now.

Mr. Rodger.—Yes, in Burma they can get out the soft wood after cutting quite easily and in the Insein division they can do the extraction all the year round.

President.—As regards the Mohwa reserve in Insein they have to cart the timber and the longest distance they have to do that is 30 miles and just three miles above Hlégu they get the river.

Mr. Rodger.—Yes.

Mr. Trotter.—As far as I can see, the best thing is for us to get out a Project for matches and submit it to the Tariff Board before sending it to the Government of India for sanction.

President.—Mr. Rodger, as regards your suggestion about a special forest officer would you be able to get a fairly senior officer on the pay you suggest?

Mr. Rodger.—I should think so.

President.—Would he be a deputy conservator of forests?

Mr. Rodger.—An officer with 10 to 14 years' service.

President.—You think he would be good enough for the work?

Mr. Rodger.—Yes.

President.—Would you appoint him as a sort of touring officer?

Mr. Rodger.—I think he should be attached to the Institute on my staff. There won't be any difficulty as long as we get the co-operation of the provinces and the Government of India.

President.—Of course it remains with the Government of India to do what they can so far as our recommendations go, but as regards the provinces the Government of India would not have the same authority over all the provinces because in some provinces "Forests" is a transferred subject.

Mr. Rodger.—Even if they have no authority their recommendations would carry great weight with the provincial governments. There would be very little difficulty as regards the provincial governments in instructing their local forest officers to give us all facilities.

President.—You think there won't be any difficulty?

Mr. Rodger.—No. It wouldn't cost very much and it would be quite easy.

President.—Trouble may arise in this way when the provincial forests come into conflict with those of the Government of India. Take the case of the Andamans and Burma. The Andamans are entirely under the Government of India whereas Burma is provincial. If Burma thinks that it would be profitable for itself to carry on this work of plantation rather than the Government of India doing it in the Andamans, then there may be some difficulty.

Plantations.

Mr. Rodger.—I don't think there would be much difficulty. You can well arrange I think for plantations to be started in three or four provinces wherever it is suitable.

President.—The point is, if the plantations were to be split up over different provinces then they become rather small from the commercial point of view.

Mr. Rodger.—Yes, and you think for that reason it would be better to centralize the thing, that is to have the plantation in one province?

President.—Yes. We don't know much of plantations, and we don't know what the demand may be. If the demand for match woods increases, it may go up to 200,000 tons or more, and I think until a provincial government feels that it can get Rs. 12 or 13 lakhs from an undertaking like this, it won't feel sufficiently interested.

Mr. Rodger.—I think the Imperial Government will have to point out that it is an imperial matter, that the timber should be supplied as much as possible by the country itself.

President.—I should think it would be better, therefore, to concentrate the plantation in a province from which distribution could be easily made to the other provinces.

Mr. Rodger.—Yes.

President.—It should not be a local plantation. You may have a plantation in the United Provinces, for instance; it would supply the United Provinces and perhaps the Punjab but it would not be a paying proposition to send wood to Bombay or to Burma.

Mr. Rodger.—I follow.

President.—If you had a plantation in the Andamans you can supply all the ports—it is for you to consider that afterwards. I am only suggesting that it is much better to concentrate as much as possible in a locality which can supply all the ports. That is a very important aspect of the question.

Mr. Rodger.—Yes.

President.—As regards the inland provinces they would have some natural advantages over other places: even if their cost of production was a little higher they would be able to bear it because a factory situated at the ports would not be able to compete against them, but in the case of the factories in the ports it is a different proposition.

Mr. Rodger.—Yes.

President.—Then the forest officer who would be under your charge and who would be investigating in the provinces, would supply the officer in the Institute with all the necessary kinds of wood and the experiments would be carried on here by the forest officer and the expert.

Mr. Rodger.—The whole thing would work together; that could be easily arranged.

President.—Can you give us some sort of idea as to what such a scheme would cost?

Mr. Rodger.—The central part?

President.—And the forest part, something on which we can work.

Mr. Rodger.—The forest part could be done at a cost of Rs. 75,000.

President.—I think the best thing would be to give us the annual charge.

Mr. Rodger.—Plantations are another matter. I don't know that I can give you much valuable information about that straightway. Our information about the growth of these soft woods is very scanty at present. You know that. But we could start experimental plantation in several places in India here and elsewhere pretty soon so that we might be able to give you some figures. We cannot say at the moment what a plantation on the scale you propose is likely to cost. I don't think we can get much information from any province at the moment.

President.—The Chief Conservator of Forests, Burma, gave us some information which was of course very vague.

Mr. Rodger.—Yes.

President.—I think it would be just as well for you, leaving aside the question of plantations for the moment, to carry out research in the Institute and in the forests and to ascertain first of all the quantity of wood available. That is your scheme just now, is it not?

Mr. Rodger.—Yes.

President.—If your research in this direction leads to the conclusion that there is enough wood in these forests to furnish an abundant supply, well and good, but if not, then you must undertake plantations; there is no other solution.

Mr. Rodger.—No. We must import wood or undertake plantations, one or the other.

President.—This research in the forests would be a makeshift, but the simplest thing is to decide on plantation as really the ultimate permanent source of supply.

Mr. Rodger.—I think so.

President.—You can't go on as you are doing now.

Mr. Rodger.—That is so. It is only a matter of skinning the forests if you are going to use such an enormous quantity of wood annually for matches in India.

President.—You could not tell us how long it would take to regenerate match wood species?

Mr. Rodger.—No. Plantations are the quickest way of telling that. It is really the best way of getting supplies to the factories.

Mr. Mathias.—You will get a royalty on the sale. It would be easy to deliver and therefore cheaper to the factories?

Mr. Rodger.—It is much more easy to work a plantation. You remember Mr. Watson's figures for natural forest. They were very small, only about .3 per acre.

President.—If it is .3 per acre that means a tremendous area, but if you were to undertake plantations it may be a matter of 100,000 acres or perhaps 200,000 and it might give you the whole supply.

Mr. Rodger.—Yes.

Mr. Mathias.—You gave us 50 tons acre, did you not?

Mr. Rodger.—According to the figure given by our Silviculturist we may get 40—50 tons an acre.

Dr. Matthai.—That would apply to most soft woods?

Mr. Rodger.—Yes, roughly.

President.—On a 30-year rotation.

Mr. Rodger.—Yes, personally I think it would be a little more.

President.—It is better to take a rather conservative view.

Mr. Mathias.—So that 2,000 acres planted every year on a 20-year rotation would give you very satisfactory result?

Mr. Rodger.—The only economic way of doing it would be to have it in big lots.

Mr. Mathias.—Burma, the Andamans and some other province might be able to do it?

Mr. Rodger.—I am not very sanguine about the Andamans. I don't think we can promise to undertake any plantations there. The jungle is very heavy, labour is very scarce and plantation work is not easy.

Mr. Mathias.—Let us say Assam.

Mr. Rodger.—Yes, it can be done there. They have already got several small plantations there.

President.—The important aspect of the forest research in the country would be the plantation question so that this survey that you are suggesting would be merely to find out what we have got?

Mr. Rodger.—Yes, that is just to go on with. The information that the special officer would obtain during his tour would enable him to put up to us valuable suggestions as to the places where plantations should be made, the manner in which they should be made, and the species to be used.

President.—While he is making a sort of rough enumeration of the forest he would also report upon suitable areas for plantation.

Mr. Rodger.—Yes.

Dr. Matthai.—If you agree to a scheme of the kind suggested by President, it would have to be on a more permanent basis than you suggest in your scheme. For instance, if there is to be a department in the Institute which looks after the Match industry as regards the question of wood supply and so on, that is a matter which would have to be gone over from year to year. You cannot fix a term like three years.

Mr. Rodger.—It would certainly have to be longer than three years. As far as I know there would be no difficulty in adding a section to our economic branch if we have the money. We have the organization to do it.

Dr. Matthai.—Could you give me some idea of the way in which you have organized departments for various industries? You have now four industries?

Mr. Rodger.—We have six sections.

Dr. Matthai.—What are they?

Mr. Trotter.—Timber testing, wood work, seasoning, paper pulp, wood preservation and minor forest products. We had another for tans but that has been abolished.

Dr. Matthai.—If you have an officer for the match section and that officer is assisted by a match expert, would it be the officer's business to travel from province to province keeping in touch with the Local Governments and factories? If he does that it would be necessary for him to have some kind of assistance, would it not?

Mr. Rodger.—I take it there will have to be two officers—one forest officer who will investigate the question of supply of timber and the other the match machinery expert, who will be here.

President.—You want another forest officer here?

Mr. Rodger.—There is no necessity.

Dr. Matthai.—What you want is a match technologist?

Mr. Rodger.—Yes.

President.—Who will co-ordinate the work here?

Mr. Rodger.—The Forest Economist as he does now.

President.—Here as well as in the forests?

Mr. Rodger.—Yes.

President.—Do you think that would be sufficient? Will the Forest Economist have time to do it?

Mr. Rodger.—I should think so, as long as we have the requisite staff.

President.—The trouble is this. If the Forest Economist were to do this work, it may be all right just now, but as time goes on—the match business is a long business; it may take 30 or 40 years if you go in for plantation—and in the meanwhile he is given other work...

Mr. Rodger.—If we find the work too much we will engage an assistant.

President.—We don't want to run the risk of the match department being squeezed out. We would rather that some arrangement was made by which that work was not interfered with by any other work thrown upon this Institute.

Mr. Rodger.—I would guarantee that.

Mr. Trotter.—The match Section will be a separate Section altogether, not part of the Forest Economist's main office.

President.—Take your own case. You combine in yourself two offices; in the same way something else may turn up and that work is given to the Forest Economist, with the result that it may not be possible for him to pay as much attention to the match work as he otherwise would.

Mr. Trotter.—That is covered by the Project which is a definite programme laid down by Government and work has to be continued according to the Project.

Mr. Rodger.—I would guarantee that as long as I am here.

President.—Are you sure that that would not happen?

Mr. Rodger.—If we started the work we would guarantee that it would be run properly and that it would not be squeezed out.

Dr. Matthai.—If apart from the match technologist you have only the Forest Economist here isn't there the danger that the match section may not be sufficiently in touch with developments elsewhere? After all the match technologist is the man whose special business it is to look after match work here, and he would remain in the Institute?

Mr. Trotter.—The Forest Economist tours considerably.

Dr. Matthai.—He has so many things to see to. The technologist won't tour, he will remain here.

Mr. Trotter.—He won't remain absolutely definitely in one place. He will tour, see factories, and report what is going on.

Mr. Mathias.—I am not quite clear as to what the scheme is. As I understood it, you would have a match technologist here to look after the technical aspects of match manufacture on the spot. In addition to that you would have an officer who would perhaps be a sort of *liaison* officer between the Central Government and the local governments who would go round and ascertain what the supply of match wood is, enumerate and so on, and also advise on plantation. He will also keep in touch with factories and factory demands, both the officers working under the Forest Economist. Is that your scheme?

Mr. Rodger.—I don't know that I would ask the forest officer touring to get in touch with match factories so much.

Mr. Mathias.—You would have a third officer then?

Mr. Rodger.—No, not in the first instance. We may have to have an assistant whose special duty would be to study the match question under the match technologist and the forest officer, if we found that it was impossible for the Forest Economist to devote enough time to the subject.

Mr. Mathias.—It would be necessary, would it not, to keep in close touch with modern manufacturing methods?

Mr. Rodger.—As Mr. Trotter said, the technologist could go out from time to time and study any specially interesting points, in the Indian factories, which might assist him, and thus keep in touch with them.

Mr. Mathias.—I may be wrong, but during the ply wood enquiry I gained the impression that the manufacturers themselves seemed not to be in very close touch with Dehra Dun.

Mr. Rodger.—That was because we never had a special officer to be in touch with them.

Dr. Matthai.—As a matter of fact it is an easier proposition to get into touch with ply wood factories because there are just two or three big factories, but in the case of the Match industry you would have factories scattered all over the country.

Mr. Rodger.—I think Mr. Chairman you will agree that if we were to advise on the Match industry the best way would be to have a separate section added to our economic branch. But as regards plantations . . .

President.—As regards plantation? I am not quite clear in my mind as to what the position is. Supposing you selected the kinds of wood on such information as you have and you selected an area, and say the area was in a province like Burma, then it can be done in two ways. You may be able to influence the Provincial Government to undertake plantation or supposing it says "we are not going to do it; we are not going to spend money on it", can the Government of India say to the provincial Government "All right, if you are not prepared to spend the money, we will spend the money; and the plantation will be under our management"?

Mr. Rodger.—I don't think that could be contemplated. That work must be done by the province itself.

President.—What control or interest would the Government of India have in a provincial plantation? I just want to understand how the thing would work.

Mr. Rodger.—The Government of India would have no direct interest in it.

President.—The point is, the Government of India is interested in the supply of this wood because it is decided to establish a match industry in the country. But it cannot command the supply of match wood except through the provincial Governments. In such a case what do you suggest would be the position?

Mr. Rodger.—I think that if the Government of India put up a good case to the provincial Governments we shall find the provincial Governments quite willing to come into line with the Imperial Government and make the plantations required.

President.—Do you anticipate any difficulty there?

Mr. Rodger.—No, I don't.

Mr. Trotter.—If the provincial Government can see some profit there would be no difficulty at all!

Mr. Rodger.—I think if the provinces realized that it was an Imperial matter it would be up to them to help as much as they could.

President.—It is important from the provincial point of view also. Supposing one province produced all the supplies, it may be that the factories might migrate to that province; that in itself might be of great advantage to that province, so that there would be an inducement to the province apart from the direct commercial aspect of the question. But the only thing is this: Do you think the Government of India will have any difficulty in getting the co-operation of the particular provincial government of the province in which they decide to do the plantation?

Mr. Rodger.—I don't think so, judging from our past experience in similar cases.

Dr. Matthai.—If we make a proposal to the Government of India, it is the responsibility of the Government of India to help match factories in India with information as to the convenient sources of supply and if there is no convenient source of supply in any area, to take up the question of finding suitable areas for plantation and the sort of woods that are suitable and so on, in that case would it be possible for you to suggest a scheme which would enable the Government of India to discharge that responsibility?

Mr. Rodger.—Certainly.

President.—What did you tell me the other day was the gross revenue from forests in Burma?

Mr. Rodger.—Rs. 223 lakhs for the year 1925-26.

President.—What is the gross revenue?

Mr. Rodger.—Rs. 259 lakhs is our nett profit for the year ending March 31st 1926, of which about half is from Burma.

President.—Burma gets such tremendous revenue from other forest sources, that unless it realizes that there is money to be made directly from plantation, and indirectly by the establishment of fairly big industries in the province, it may not take sufficient interest in the question.

Mr. Rodger.—Is it not the case that the Match industry is a very flourishing one in Burma now?

President.—Yes. As regards the supply of wood of course it is more fortunate than other provinces.

Mr. Rodger.—It is an established industry there and therefore the Burma Government will probably be willing to do all it can to see that the industry is carried on.

President.—We have got to see to India as well.

Mr. Rodger.—You mean if matches are made in Burma the revenue goes to Burma and the trade also goes to Burma?

President.—Yes. I want a proposition statement about this scheme.

Mr. Rodger.—We can produce it for you.

President.—The Government of India would like to know what will be the probable commitments.

Mr. Rodger.—You would like me to get out a proposition statement regarding the match department, what it would cost us here?

President.—Yes.

Mr. Rodger.—I shall do so.

President.—As regards this survey—I do not understand very much Mr. Blanford's note on working plans—would you follow the same method in your survey?

Mr. Rodger.—We could not do that because that would be very elaborate, and it would take a very long time. But take for instance the Pegu Yoma forest which stretches 200 miles north of Rangoon. We could give the Board within a reasonable time quite an approximate figure of the amount of soft wood available in that area because that is rather a self-contained block.

President.—Is that evergreen forest?

Mr. Rodger.—No, it is not. Most of it is teak forest.

President.—There is some evergreen forest in the Insein division.

Mr. Rodger.—There is, but there is little soft wood in that. We already know the percentage of evergreen in each of these forests and the percentage of the deciduous forest. I was myself in charge of Insein division at one time.

President.—I thought if you were going to carry out your survey on anything like the lines suggested by Mr. Blanford, it would take perhaps 50 years.

Mr. Rodger.—It would.

President.—In Burma you have got survey maps.

Mr. Rodger.—They are very good maps.

President.—You can take out each circle from those maps and take a certain number of specimen areas and make your calculations.

Mr. Rodger.—Yes.

President.—Will you have such accurate information and maps and so on as regards the Andamans and the other provinces that you mention?

Mr. Rodger.—We can prepare that for the Andamans within a reasonable period.

President.—Can you?

Mr. Rodger.—Certainly, but the Andamans are difficult forests and some of the forests are unexplored because of the wild tribes. We could give you figures for the Andamans within a reasonable time.

President.—As regards these two lists that we received from the Institute, you say that you have collected a certain amount of information as regards the suitability of the different woods, but that information, I take it, is really supplied to you very largely by the manufacturers?

Mr. Trotter.—Practically all.

President.—The draw back to the use of this information is that it may not be entirely reliable. Some manufacturers, we have found in the course of our enquiry, are very optimistic as to the quality of the woods, others on the contrary don't think that some of the woods which have been found satisfactory, are satisfactory from their point of view, so that really speaking at present we have not got any reliable information.

Mr. Trotter.—In some cases there is very good indication as to whether a particular match wood is suitable or not. Where all the factories have reported that a particular wood is good, you can take it that there is something in it, whereas if you find that there are conflicting reports—one says the wood is good while another factory says it is bad—that is not reliable.

President.—A good number of species are mentioned in the lists.

Mr. Trotter.—We have brought the old list given to you up to date. These are the timbers that have been reported upon and found good by most factories. (New list handed in.)

President.—It would be better to get the species which have been more or less reported on as uniformly good. Are they the same as are given in Mr. Rodger's note?

Mr. Rodger.—The present list is more numerous.

Mr. Trotter.—We have got about 20 species down on our new list.

President.—Are they in easily accessible areas?

Mr. Trotter.—Yes, almost all of them. We have also got a second list of the species which are common and which are available in fairly large quantities. The first list is of species which have been well reported on by factories and which it would be worth while considering for plantations. (Second list handed in.)

Dr. Matthai.—In this revised list have you had to revise your opinion about any of these woods?

Mr. Trotter.—Yes, in some cases.

President.—What about setkadon? I think that is amongst the very best for splints that we have come across.

Mr. Trotter.—That is *Trewia nudiflora*. In addition to the two lists already handed to you, we have got a list of the fastest growing trees but most of these have not been tried for matches. They may be worth trying and our intention is that as soon as we get the match machinery we will try some of these, as, if they are suitable for matches, they would be very quick growing and worth trying in plantations.

Storage of wood.

Mr. Mathias.—I want to ask you one or two questions about the storage of wood. We have had very different accounts as regards the storage of wood in water. Mr. Schele, the General Manager of the Swedish Match Company in India, told us that it was very use little storing match wood in water because although you might avoid insect attacks it deteriorated in many other ways in water storage. In Burma, we found that almost every factory stored wood in water, but on the Bombay side no factory at all stored in water. Could you give us your opinion as to the effect of storage in water?

Mr. Trotter.—Storage in water is the best form of storing we know of for any type of soft perishable wood. It is a well known form of storage in Australia, America and Canada and we have never had any complaint from anybody about it. There are other forms of storage such as the storage of logs with treated saw dust which is not very difficult, if you have saw dust available. You treat your saw dust either with creosote or some other preservative and cover your wood with that.

President.—That is to prevent infection in the yard. If this wood comes from the forest already infected with insects, would it kill the insects?

Mr. Trotter.—If the wood comes with the insects from the forest the best method of getting rid of the insects is to bark the trees in the forest, as they are mostly bark borers.

President.—They can be barked by hand by the fellers?

Mr. Trotter.—Yes. The Forest Entomologist has written a report to the Swedish Match Company about it. The insects are chiefly in the bark and to start with they don't go beyond the bark, so that by barking the logs in the forest you can get rid of the insects.

Mr. Mathias.—You would give us your definite opinion that it is advantageous to store the wood in water, would you?

Mr. Trotter.—Certainly. That is the opinion of all the authorities on the subject. Here is the opinion of three writers. (Books shown.)

Mr. Mathias.—For how much longer would it preserve the sap?

Mr. Trotter.—Logs stored in water dry very very slowly. They do dry to a certain extent, but taking it as a whole, water storage will preserve the log in the condition in which it comes in from the forest, I should certainly say, for 12 months.

President.—Twelve months would be as long as you could keep the logs?

Mr. Trotter.—No, I am referring only to the sap. Water stored logs will remain sound for a long time. It is the form of storage which is used in all Forest Research Institutes.

President.—How soon after extraction are they to be submerged in water?

Mr. Trotter.—The sooner the better.

President.—That is the point. It may take four months before it reaches the factory.

Mr. Trotter.—In that case barking in the forest is the best thing to stop insect attacks, but the log will of course dry out quicker without its bark.

Mr. Mathias.—I was talking about the sap. Take a typical case. On the Bombay side they get their wood within a month of being cut in the jungle. The difficulty there is that they cannot get a supply of wood in the rains; they cut it in the hot weather. So, if they could submerge a month old wood in water there would not be any difficulty in getting the supply right through the rains.

Mr. Trotter.—No.

President.—It must be completely submerged?

Mr. Trotter.—Yes.

Mr. Mathias.—That you could effect by putting weights on the logs?

Mr. Trotter.—That is not difficult.

President.—Are there any chemical preparations that you could apply to the ends to protect the sap in the log?

Mr. Trotter.—There are. In the case of match woods everything has got to be cheap and the cheapest form known of temporary end protection at present in India is cowdung and mud. We use that. That does prevent end drying but it is only a temporary measure and the mud is apt to come off if the log is handled a lot. There is also a special mixture which we know here as cold dip which can be painted on the end of the logs. This lasts longer than cowdung and mud and is fairly satisfactory in protecting the ends of the logs from drying and cracking. This is a subject on which we are now carrying out investigations and results to date show that cold dip is distinctly beneficial, especially in damp localities.

President.—Is it expensive?

Mr. Trotter.—Not very expensive. It costs Rs. 6 per gallon.

President.—How much would it cost per log?

Mr. Trotter.—One cannot say very accurately but it should not be more than a matter of an anna or so.

President.—That is not very much.

Mr. Trotter.—I cannot give you an exact figure, as it would vary with every log.

President.—How does a log begin to dry? It begins at the ends and then goes in, does it not?

Mr. Trotter.—It always dries fastest at the ends because the pores of the wood are open at the end of a log. Cold dip helps to close the pores and prevent the moisture from escaping. It is not infallible but it is a help.

President.—The idea is to close the ends. That does not seem to be a very elaborate or expensive process.

Mr. Mathias.—None of the processes appeared to be adopted in the match factories in India. We saw none of the logs on the Bombay side covered with cowdung and mud. We never heard of that in Bombay.

Mr. Trotter.—Possibly they get their logs in a fresh condition. We often use end protectors and a lot of our logs are sent to us coated at the ends with cold dip or cowdung and mud, or other protective materials.

President.—Messrs. Adamjee said something about a kind of coating that they used but could not tell us what it was. It was bright red.

Mr. Trotter.—Perhaps it was red lead. That is much more expensive.

Mr. Mathias.—When the logs are received in a fresh state in a factory of the size of the Western India Match Factory it looks as if they should see that these are fairly treated to prevent them from drying?

Mr. Rodger.—Our experience of people who use timber, all over India, is that they don't protect it as they ought to; they very often leave the timber out in the open, baking in the sun, and then complain that it splits and deteriorates.

Mr. Mathias.—So that we must not take these complaints against the quality of Indian soft woods very seriously?

Mr. Rodger.—No. I think if they are properly treated they would keep their quality much better.

Mr. Trotter.—Not in all cases. Papita and some other very perishable woods begin to turn black and blue with fungus within 24 hours if cut and left lying in the open.

President.—I am not satisfied that Papita is the same thing as the Burma sawhya.

Mr. Trotter.—It is quite likely that it is not. We are trying to clear up this point but there is great difficulty in collecting the flowers and fruit of these species, for proper identification.

President.—As a matter of fact Messrs. Adamjee Hajee Dawood and Company very largely depend upon sawhya.

Mr. Trotter.—If these woods are dried out very quickly there is less danger from fungus. They probably dry their splints at once.

Mr. Mathias.—In your opinion the Andaman wood would be more liable to fungus attacks than the Burma wood?

Mr. Trotter.—Yes. The reason for this is probably that the warmer and moisture atmosphere of the Andamans is more conducive to fungoid growth.

President.—In Burma, they get this timber from different Divisions. There are some in which they work in the monsoon.

Mr. Rodger.—Yes, the more distant ones, from which the logs are floated out.

President.—And the nearer ones they cut in the hot weather.

Mr. Rodger.—Yes, they can bring it down to the factory at once.

President.—What about boiling? I think there are one or two factories which boil the wood. As far as I recollect on the Bombay side the Gujrat Islam Match factory does it before peeling, but that is not followed by other factories.

Mr. Trotter.—That is a point on which we are, at present, not qualified to express a definite opinion, but it is one of the things that will be taken up in our Project.

President.—The other factory is the Punjab Match factory where the log is boiled.

Mr. Trotter.—We tried boiling dry spruce and silver fir under pressure before peeling; we boiled under various pressures and for varying periods but the results were inconclusive.

President.—Was the wood more or less dry?

Mr. Trotter.—Yes. We forced water into the wood under pressure; in fact we filled the log with water before we started to peel it, but I think the logs we had, had got a certain amount of fungus in them and the results were not satisfactory.

Dr. Matthai.—What sort of wood was it?

Mr. Trotter.—It was Himalayan spruce and silver fir. We had slightly better results from fairly green logs which peeled better but these were not absolutely green. We are not in a position at present to give you anything definite upon boiling.

Qualities of a good match.

President.—There are two points to which I would like to draw your attention. The first is, you have made a statement that a first class match cannot be manufactured, as far as you can tell us, out of Indian wood. Now that you are likely to undertake investigations we should like to be clear as to what we should require for a first quality match. What do you exactly mean by a first class match?

Mr. Trotter.—By first class, I mean the aspen match of Europe.

President.—Quite true. Leaving out the question of appearance of the wood, whether it is white or brown or something else, do you consider that aspen has any other special quality about it?

Mr. Trotter.—Yes, I do think so. It is a straight grained wood which peels very cleanly; it also has the required strength for a match splint, absorbs paraffin, and burns as it should.

President.—I will put it to you this way. There are many things which are supposed to be high quality because they possess strength which is superfluous and which is not essential really speaking. Take for instance the case of a building. If you can construct a very substantial building to last for 15 years which will meet your needs; what is the good of having a building which would last for 500 years? The same thing applies to matches, so long as the match is strong enough for the purpose for which it is intended.

Mr. Trotter.—The difference is this, that aspen is a straight grained wood and when the grain of a timber runs parallel with the length of the match from end to end the strength will always be sufficient for a match. But in India, the fibre of a great many of the soft woods grows spirally or is cross grained, the result being that when you peel, the grain does not run from end to end parallel with the length of the splint and you get a cross grained match, which snaps easily. These woods, in addition, do not peel well.

President.—Does it affect the lighting quality of the match? So far as we have been able to see that has not affected the lighting quality of the match for all practical purposes.

Mr. Rodger.—They break more easily.

President.—You are accustomed to using aspen matches and therefore you use them in a particular way and you use more force than it is necessary to light a match. It is greatly a matter of habit. If the position was slightly modified you would strike it more gently.

Mr. Rodger.—It is largely a matter of appearance. It is an important thing.

President.—It may be an important thing but we don't attach so much importance to the appearance.

Mr. Rodger.—But the bazar thinks of the appearance.

President.—The Bazar thinks more of the price now. It is one of the points made by the Swedish Match Company, that wherever a consumer has certain fads there they stand much better chances of success than in other places where the consumer has not got such fads. It is to the advantage of the manufacturer to take advantage of human weakness. But apart from that if you were always to compare Indian wood with aspen you would obviously come to the conclusion that matches could not be manufactured in this country. We want rather to guard you against that.

Mr. Trotter.—We take aspen as our ideal as far as we can.

President.—We have seen several varieties of soft wood being used for matches, sawbya, setkadôn and so on, and the matches appear to be fairly good. We should like you to understand what we mean by a reasonable quality of match: it should light properly, it should not break too easily, it should be sufficiently porous to absorb paraffin and its head should not fall off. These are the essential qualities; we don't attach very much importance to the colour.

Mr. Trotter.—This has been fully discussed in the Forest Economists note which you have already. In that note it is stated that we do not consider that there is any timber in India which is likely to be of immediate use in replacing aspen but that there are many Indian timbers from which matches can be made and that these matches are good enough for all practical purposes.

Dr. Matthai.—In your original list you mention two woods which you say are very good for splints. Do you mean that they are as good as aspen?

Mr. Trotter.—No.

Dr. Matthai.—What do you mean by very good?

Mr. Trotter.—It is possible that such a timber as *Pinus excelsa*, might compare with aspen as regards quality, but the price of this timber is too high for its being used for match making.

Mr. Mathias.—Why, what is the price?

Dr. Matthai.—It is not more than a rupee per c. ft. now.

Mr. Mathias.—They are using that in the Punjab factory and they are getting it from a distance of 80 miles in logs.

Mr. Trotter.—They get it from Government contractors I suppose?

Mr. Mathias.—Yes, and from Government depots. Could you give us the price per ton approximately?

Dr. Matthai.—I think from the costs that we have had from the Mahalaxmi Match Factory which is using this wood, that they must have got it at about 12 to 14 annas per cubic foot.

President.—Rs. 50 a ton at the factory may not be regarded as excessive?

Mr. Rodger.—No.

Mr. Trotter.—This wood has been reported on as likely to prove suitable for match splints.

President.—It is obtained from the Himalayas?

Mr. Trotter.—From the Ganges north-westwards approximately, and to a certain extent in the Eastern Himalayas.

Mr. Mathias.—When you say there is no wood which is as good as aspen, you are talking of the colour?

Mr. Trotter.—No, I am referring to all characteristics.

Mr. Mathias.—Supposing we were told that there was no objection to any coloured wood being used for matches, if it was otherwise suitable, it is probable that other woods suitable for match manufacture might be found.

Mr. Trotter.—Yes, it is very probable. For instance I think toon is a good and not very expensive wood. It peels cleanly and has been reported on as very good except for colour.

Mr. Rodger.—That is very nice wood indeed.

Mr. Mathias.—If you are going to cut out the colour altogether you might use these coloured woods for matches.

Mr. Rodger.—If you could educate the people to take brown matches, it is all right.

President.—Supposing you found a very suitable wood otherwise but it was not very strong, it might be possible to utilize it by making slightly thicker matches?

Mr. Trotter.—What I mean by strength in a match really goes hand in hand with the question of straight grain. If a match is straight grained it usually cuts much cleaner and therefore makes a stronger match than a match which has not got a straight grain, but it need not be very strong.

President.—Take these matches that we have here from the Bareilly Match Factory, where they use the Simplex machinery. They would not be able to use splints unless they were reasonably straight because crooked splints would not feed into the machine. But they don't find any great difficulty as regards

that in the case of this particular wood which they are using. I mean straightness of the grain is not so important as one would think for manufacturing purposes.

Mr. Trotter.—You were asking me about the price of *Pinus excelsa* per ton. It costs now about Rs. 1-3-6 at the dépôt. Usually logs are sold in auction.

Dr. Matthai.—What is the other use for this wood in India?

Mr. Trotter.—It is used for sleepers but chiefly as a constructional timber.

President.—I think you must select the wood for which there is no other commercial use. The other point I wish to draw your attention to is the question of manufacturing splints in the forests. Your main reason for that is that the wood would otherwise get dry?

Mr. Trotter.—The main reason is that you are actually exporting only about 40 per cent. of the log in the form of splints.

President.—So far as that is concerned you would not save so much on the freight of the splints because the cubical contents of the logs are smaller than the corresponding number of splints and therefore they would charge at a much higher rate for splints than they would for the logs. The result would be that the splints would cost you more. It may do as regards special qualities.

Mr. Mathias.—Railway freight on logs is lower than the freight on splints.

Mr. Rodger.—On the manufactured article the freight is always more expensive.

Mr. Trotter.—I am talking of the factory being near the forest in which the portable splint machinery would be working.

President.—You must send your splints from the forest to the factory.

Mr. Trotter.—My idea was this. Take the forest near here in Chakrata. That is an area where spruce grows. It is 50 miles from the forests to the bottom of the hill where the dépôts are. The match factory would be near the dépôts, with the splint machinery in the forests.

President.—You must bring the wood to some central place even in the forest. You cannot remove your factory from place to place.

Mr. Trotter.—That can be done with portable splint machinery.

President.—It is not possible from the commercial point of view.

Mr. Mathias.—You can't shift your labour.

Mr. Trotter.—Is it not done in other forest industries? Portable saw mills are removed from one spot to another.

President.—It has not been practised in this industry on any large scale, even in Sweden which is the biggest match manufacturing country. In the case of the match industry only chopping machine won't do, you have got to dry the splints, they require packing, etc. We may tell you that we have gone into that question and we are rather of the opinion that separating the manufacture of splints from the other processes is not an economical proposition.

Mr. Trotter.—We are basing our suggestions on what is now done in Japan. They have portable splint mills.

President.—But what is happening in Japan? The industry is dying out.

Mr. Trotter.—The idea is only a suggestion to ease matters during the interregnum period between now and until plantations become exploitable.

President.—I think we should not lay any stress on that aspect of the question at all. The position seems to be this just now that the total demand for matches in the country may be taken as 17 or 18 million gross. Before this duty was imposed we were importing 13 to 14 million gross and the imports last year have come down to about 3 million gross so that India has already manufactured 13 to 14 million gross of boxes per year and I think nearly all the factories including Ambarnath now use Indian wood for boxes. Therefore half the quantity of wood used in match manufacture here has

been somehow found in India. Then there are four or five factories which are using entirely Indian wood, such as Messrs. Adamjee Hajee Dawood and Company, Burma, and two other factories here, the Mahalaxmi Match Factory and the Bareilly Match factory, and I think also the Gujrat Islam Match factory, Ahmedabad, and they represent a fairly big percentage of the total consumption.

Mr. Trotter.—Are not their supplies being obtained from further afield every year? Have they not mentioned this to you.

Mr. Mathias.—If you take Burma, Calcutta and the Assam factories and also the Bareilly factory and the Gujrat Islam Match factory, they account for practically half the consumption of matches in India and of these the Calcutta and Burma factories are assured of their supply of timber from the Sundarbans, the Andamans and Burma for at least 20 years.

President.—They are more or less assured of their supplies, but as regards the other factories there is less evidence regarding future wood supplies. It appears that the present position can be continued and that 3 or 4 million gross per year will be imported for some time.

Mr. Trotter.—What you mean is that at present the situation is not acute.

Mr. Mathias.—On the Bombay side they use aspen for splints and Indian wood for boxes.

President.—There are perhaps certain classes of wood which may be available by storing in water and so on, so that we have not yet reached the stage, apart from other considerations, when the manufacture of splints in the forest has become necessary.

Mr. Trotter.—The impression we had was that the situation as regards the supply of wood was getting very acute, and it was for this reason we were considering the idea, so that spruce could be peeled green.

President.—This is the report we have got from the factories, and forest officers.

Mr. Trotter.—Has the Board ever considered the question of bamboo for the manufacture of splints?

President.—No. Nobody who has appeared before us has advocated bamboo.

Mr. Trotter.—Bamboo has every attribute that a match timber should have and in addition it has a three years' rotation as against a 20 or 30 years' rotation for trees. Of course, the chief difficulty is the machinery, to start with, and getting bamboos of the same size, but I think myself that it is a question which should be taken up at once by the match technologist.

Dr. Matthai.—Have you had reports from the Malabar Match Company about their experience?

Mr. Trotter.—They have definitely turned it down. They had to invent new machinery which could cope with bamboo satisfactorily. They did have machinery which could tackle uniform bamboos. This machinery cut the bamboo in small lengths, split it, and then scooped from the inside a veneer, which made the boxes. The remaining portion was split and used for splints. It was a very satisfactory method of making matches, but the trouble was that the bamboos were often of different girth and the scoop would not fit the different girths. The problem is whether it is possible to invent machinery to tackle bamboos of all girths.

Mr. Mathias.—I think the Swedish Match Company made considerable experiments with bamboo and turned down the proposal altogether.

President.—They are flat splints, are they not?

Mr. Trotter.—No, square splints.

Mr. Mathias.—You would have to revolutionize the machinery?

Mr. Trotter.—Yes.

Dr. Matthai.—Is it the ordinary kind of bamboo?

Mr. Trotter.—The one they were using was the *eta*; it grows in large quantities down there where the factory was erected.

Mr. Mathias.—Is there any difficulty in the splint manufacture of it, apart from making veneers?

Mr. Trotter.—The match part was quite satisfactory, but there was one thing against it; the matches before they were cleaned up were very fibrous, but I don't think that is a great difficulty. It could probably be got over.

Composition.

President.—Now as regards the composition to which you refer in paragraph 25 of your letter of the 11th April 1927. Have you been able to supply the manufacturers with any information as regards composition? It does vary very largely with the climate and so on, does it not?

Mr. Trotter.—It does. There is a publication on this subject, which I have no doubt you have got, it is issued by the Bihar and Orissa Industries Department.

President.—Is that by Mr. A. P. Ghose?

Mr. Trotter.—No. It is by Dr. Caldwell.

President.—As regards that you require local investigation; Dehra Dun would not be able to supply proper formulae for different places I suppose?

Mr. Trotter.—I think the factories have their own chemists? If they want to they can take advice from us and try different formulae.

Mr. Mathias.—It is past history, this complaint about the chemical composition, is it not, because these factories are now manufacturing matches which are quite good in the monsoon?

Mr. Trotter.—Yes, but the trouble is that the smaller factories do not take the trouble of going into the matter carefully and their matches are not satisfactory.

President.—Dr. Sen, I dare say you know the principal chemicals used in match manufacture?

Dr. Sen.—Yes.

President.—What are your qualifications, Dr. Sen?

Dr. Sen.—I am a Ph.D. of the Calcutta University and also Premchand Roychand student of the same University.

President.—How many years' experience have you now?

Dr. Sen.—I joined the service in 1905, I belong to the Agricultural Department.

President.—In this Institute are you the official chemist?

Dr. Sen.—I have been occupying this post for the last two years.

President.—What I wish to examine you about is a very simple point and it is this. There are certain chemicals used here for producing splints and boxes and some of these chemicals, I understand, are rather dangerous.

Dr. Sen.—Yes, some of them are.

President.—In the sense that they will explode under certain conditions.

Dr. Sen.—Yes.

President.—I wish to know what are the chemicals used in match making which you consider are not safe for use by anybody and everybody.

Dr. Sen.—I was asked by the President of the Forest Research Institute to write a short note on it and I have just mentioned some chemicals which are used in the manufacture of explosives (list handed in).

President.—We will go through the note later on. But the point is—here are these chemicals mentioned, *viz.*, chlorate of potash and bichromate of potash. Are these chemicals liable to explode?

Dr. Sen.—They are not liable to explosions by themselves, but if they are submitted to friction with any organic matter, they explode. As a matter of fact they are used not only in the manufacture of crackers but also in the

manufacture of explosives, for starting the ignition by percussion as for instance in detonators.

President.—In some places in Bengal, they make the chemical composition in cottages—perhaps sometimes in the kitchen or sometimes in places not far from the kitchen. Do you consider that safe?

Dr. Sen.—If the usual safeguards are observed, I think, they can be used all right. Very explosive substances like nitro compounds are not generally used in the manufacture of matches. But the chemicals generally used in the manufacture of matches, if a certain amount of care is taken, are not likely to be very dangerous.

President.—What sort of care?

Dr. Sen.—No light should be brought there. No unauthorised person should come into the room.

President.—There are half a dozen children playing about. The mother may be cooking and the father may be mixing the chemicals.

Dr. Sen.—Potassium chlorate is a dangerous chemical. Every year in Calcutta during the *diwali* festival there are some accidents due to this.

President.—From its use in crackers?

Dr. Sen.—Yes. Sometimes when the boys are manufacturing them in their houses they explode.

President.—So you consider, don't you, that the chlorate of potash is amongst the most dangerous?

Dr. Sen.—Yes, one of the very dangerous things if it is handled carelessly.

President.—Or—put it this way—if it is not handled very carefully?

Dr. Sen.—Yes.

President.—Supposing you had to handle this substance in a room what precautions would you take to prevent accidental explosion?

Dr. Sen.—I shall give you a concrete example. We have to use this in the laboratory for experimental purposes.

President.—Do you mean chlorate of potash?

Dr. Sen.—Yes. When we have to mix potassium chlorate and, e.g., sulphur, we mix them very carefully with the help of a feather.

President.—You have to mix it with some liquid, haven't you?

Dr. Sen.—We have generally to mix it with solids. Potassium chlorate is soluble in water. In the dissolved condition, it is not dangerous.

President.—What they do in a better organised factory is that they don't take the chlorate of potash out of the box until they have got glue ready and when the glue is ready they open it and put it in the glue.

Dr. Sen.—When the paste is ready, they mix it.

President.—In an ordinary cottage such precautions may not be taken.

Dr. Sen.—If they handle it carelessly, that will be dangerous.

President.—If the box is left open, what will happen?

Dr. Sen.—Nothing happens.

Dr. Matthai.—If they carry on this industry as a home industry, there is a very real danger of these safeguards being forgotten.

Dr. Sen.—Don't you think that it is to the interest of these people to take care?

Dr. Matthai.—I am speaking as a matter of ordinary experience.

Dr. Sen.—May I just point out one instance? I have seen the sulphuric acid factory of Messrs. D. Waldie and Company. There even ignorant coolies are accustomed to handle such a highly corrosive substance as sulphuric acid. They don't get into much trouble.

Dr. Matthai.—What I am asking you is this. Supposing these chemicals which are required in the manufacture of matches are mixed and used in a little house say in a crowded street of Calcutta by a person who employs

just three or four people belonging to his family—there is no kind of supervision or organisation—is not there a real danger that the safeguards you speak of might be ignored altogether?

Dr. Sen.—In some cases it might happen but I know that a very large amount of pyrotechnical material is manufactured in Calcutta every year.

Dr. Matthai.—There are a number of accidents too.

Dr. Sen.—Considering the volume of business I don't think the number of accidents is very large. Of course it is deplorable whatever accident happens.

Dr. Matthai.—That takes place only occasionally in a particular season.

Dr. Sen.—There are some shops which always sell these.

President.—It is not a question of selling them but making them.

Dr. Sen.—Making and storing them. Have you been to the Chitpore side? If you go there you will find some shops filled up with crackers and such inflammable material.

Mr. Mathias.—Don't you think that in the interests of public safety it is desirable that houses in which these operations are carried on should be located at some distance from other houses?

Dr. Sen.—Yes, it is desirable.

Mr. Mathias.—You don't think that operations of this sort should be carried on in houses which are in the middle of crowded streets?

Dr. Sen.—It should not be done in promiscuous situations.

President.—What is the action of bichromate of potash if it comes into contact with chlorate of potash?

Dr. Sen.—Not much trouble. Both are of the same type. They both belong to the class of oxidising substances.

President.—What about amorphous phosphorus?

Dr. Sen.—If it is by itself, it is not so troublesome. But if it comes into contact with potassium chlorate it is liable to cause trouble. As you know some matches contain these two substances and it is necessary to add certain other compounds to restrain the violence of the reaction.

President.—When kept apart from one another these chemicals are not very dangerous.

Dr. Sen.—They are not.

President.—But in conjunction with each other?

Dr. Sen.—In certain circumstances if they are mixed they are very dangerous. I have not mentioned in the list of chemicals used both in the manufacture of matches and of explosives, innocuous substances like kieselguhr.

President.—These are the chemicals which are used in the chemical composition for matches. Now the question that we are considering is this. Can they be safely used by illiterate persons in all kinds of places such as kitchens or any other parts of the house in a crowded locality?

Dr. Sen.—Certainly not. I think that there should be some regulation to restrain the use of these things by unauthorised people.

President.—This composition has to be prepared each day as the case may be and used up. It cannot be kept in solution for any length of time.

Dr. Sen.—I think some of them might be kept in solution.

President.—What I want to know is this. Can they go to a chemist and say "give me this composition for match heads and for the sides"? Can the chemist supply such a composition and can they keep it for a fortnight or so?

Dr. Sen.—The paste which is applied to the heads can be kept for some time. As you know there is a certain amount of preparatory manipulation to be done; for example cooking in water, and adding the other ingredients afterwards, etc. They are very expensive to transport in the pasty condition.

President.—Can the paste be kept for any length of time?

Dr. Sen.—Except in the case of certain readily decomposing chemicals like glue.

President.—They all have got to go in.

Dr. Sen.—Yes. Some of these organic chemicals deteriorate.

President.—What I am suggesting to you is this. If these people were to dip the splints and to paint boxes, they must prepare the composition themselves more or less.

Dr. Sen.—It is better not to buy it ready made. There should not be another agency to supply this. It is better in every way for it to be made up by the match manufacturer.

President.—It would be better for the match makers to mix the chemicals themselves.

Dr. Sen.—Yes. Don't you think that under those circumstances these people will take greater care? The only thing is that they must know the business and they must take proper precautions.

President.—When a little money comes along in a poor family, they don't think very much of the risk.

Dr. Sen.—Sometimes people become careless—specially because of the familiarity.

Dr. Matthai.—You require a little more knowledge of chemicals than laymen are likely to possess in order to use these things?

Dr. Sen.—Yes. But don't you think that when it is their business to prepare these they generally come to know about the nature of the raw materials?

Dr. Matthai.—Provided they know the business well enough! The two most dangerous substances in your opinion are amorphous phosphorus and chlorate of potash.

Dr. Sen.—Yes.

Mr. Mathias.—From the point of view of fire, is not sulphur also dangerous?

Dr. Sen.—Yes, if it is exposed to fire. But sulphur does not burn spontaneously.

Mr. Mathias.—From the point of view of conflagration, sulphur is dangerous.

Dr. Sen.—Yes. I have entered in the list charcoal and certain other relatively innocuous substances as they are employed in the manufacture of gunpowder, etc. I have mentioned several which find some application or other in the manufacture of explosives, for example nitric acid.

President.—That is used with what substance?

Dr. Sen.—They take red lead and mix it with nitric acid. Red lead is not a dangerous substance.

President.—Kieselguhr is not a dangerous thing, is it?

Dr. Sen.—No, it is not.

President.—We were told by the representatives of one of the factories that if you had this chlorate of potash opened in hand and if it came in contact with bichromate of potash, it would cause explosion.

Dr. Sen.—They are not likely to cause explosion. But if anything is combustible there is likely to be conflagration. Potassium chlorate helps things to burn.

President.—Suppose you had potassium chlorate in a tin and you dropped it on a stone floor, would it be liable to explosion?

Dr. Sen.—If it strikes heavily and contains organic impurities, it explodes.

President.—If you are trying to grind it?

Dr. Sen.—If you press it too much, it is likely to explode if there is any organic matter present.

Dr. Matthai.—Any contact with an organic matter will cause explosion.

Dr. Sen.—Yes, if it is submitted to percussion.

President.—Do any of these chemicals give off fumes which may ignite if there is an open fire in the room?

Dr. Sen.—Phosphorous of course does, whereas others help combustion.

Dr. Matthai.—Have you any personal knowledge of these small factories?

Dr. Sen.—No.



Collector of Customs, Rangoon.

A.—WRITTEN.

(1) *Notes handed in on 30th March, 1927.*

The import and export of matches, and the materials for the manufacture of matches: also the local industry of matches in Burma.

Matches.

Two statements are attached. The imports for six years, *i.e.*, from 1921-22 to 1926-27 and the exports for the quinquennial period; it was during this period, that the local industry was first established.

From the export statement, it will be seen that the local industry had practically begun in 1922-23, for, during the succeeding years, this commodity was exported to other countries. The value, being in the first year Rs. 6,500 gradually increased to almost five lakhs. A corresponding decrease in the imports will be noticed during these years, for the value which in the year 1921-22 was Rs. 31,26,117 fell to Rs. 14,19,108 in 1926-27.

It will also be noticed for the purpose of the match industry that, splints, veneers, and logs were imported in the years 1924-25 and 1925-26. But during the last year, only logs to the value of Rs. 1,35,000 were imported against 'nil' for splints and veneers. The reason is that a suitable class of wood has been discovered in Burma for this purpose.

Foreign matches were also imported from Indian ports during these years, but even these figures indicate a considerable reduction since the value dropped from Rs. 2,09,806 in 1921-22 to Rs. 42,962 in 1926-27. The Indian produce has also shown a corresponding decrease.

There are in all five factories in Burma aggregating an output of one hundred and fifty cases a day, of which a hundred cases are manufactured by Messrs. Adamjee Hajee Dawood and Company the largest manufacturers in Burma. Each case contains fifty gross boxes and the local prices range from Rs. 80 to Rs. 95 per case.

Matches imported from Siam *via* Kawkaireik are now assessed to duty under the Land Customs Act, at the same rate of duty on those imported by sea. Several reports have, however, been received that matches of Chinese manufacture are being imported across the Chinese frontier into the Northern and Southern Shan States. These quantities are reported to be limited and are consumed in the Shan States and not carried further into Burma.

* * * *

The local wholesale price of Japanese matches is between Rs. 110 to 120 per case of 50 gross boxes landed *c.i.f.* price being about Rs. 35 to Rs. 40 per case of 50 gross whereas the *c.i.f.* cost of Swedish matches is about Rs. 45 to Rs. 50 and the selling rate about Rs. 130 to Rs. 135 the invoice price being about 1s. 6d. a gross.

(2) *Letter dated the 16th April 1927 from the Collector of Customs, Rangoon.*

I have the honour to enclose herewith for your information and for such action as you may find necessary copies of letters received from two of the leading match manufacturing firms in Rangoon regarding the alleged smuggling of matches into Burma from China *via* the Shan States.

Enclosure No. 1.

Copy of letter dated the 15th March, 1927, from Messrs. Adamjee Hajee Dawood and Company, Limited, Rangoon, to the Collector of Customs, Rangoon.

We have the honour to inform you that our Agent of the Thazi Branch reports that matches bearing the label enclosed herewith are being imported

into the Shan States from the Chinese Borders *viâ* Loilem and are being sold there at very low prices, and therefore it is not possible to sell our matches there.

We shall thank you if you will kindly make necessary enquiries into the matter.

We also send herewith a match box bearing the said label for your reference.

Enclosure No. 2.

Copy of letter dated the 9th April, 1927, from the Kemmending Match Company, Limited, Rangoon, to the Collector of Customs, Rangoon.

We have the honour to quote below extract of a letter received from our Hongkong Representative, for your information:

"The chief brand which is imported into Burma *viâ* Bangkok is as enclosed being a tiger looking at a rising sun and which is known to us as 'Tiger and Sun' or 'Tiger.' About 800 50-gross cases a month of this brand are shipped north for distribution throughout the very northerly section of Siam, Indo-China and Shan States. It seems probable that these matches find their way into Burma *viâ* China, so there may be no actual smuggling from Siam into Burma on a large scale, as this is carried out by taking them into Indo-China (where the French do not dare to enforce duties on account of the savage tribes) and from there into Burma; should you find that there is no duty on goods imported from Indo-China and China into Burma it would appear safe to assume that practically all matches going into northern Burma do so *viâ* this route. I find also that there are a large number of minor routes for smuggling matches into Burma along the very southerly border of the two countries and I am told on good authority that there is a steady though small traffic across the border into the country around Tavoy; this is only one of the many less known passes where illicit traffic is carried on."

We specially draw your attention to the minor routes of smuggling mentioned by our Hongkong Representative and particularly across the border around Tavoy. In this connection we also beg to inform you that we have sent one of our canvassers to Mergui and Tavoy with instructions to investigate this matter as far as possible.

We also confirm our verbal information that we have received a report from one of our dealers in Hsipaw to the effect that not less than 5,000 tins of matches under the label "Tiger and Sun" have arrived in this and adjoining towns. This matter is being investigated by us and we shall revert in due course.

(3) *Letter, dated the 26th April 1927 from the Collector of Customs, Rangoon.*

In continuation of my letter No. 4733-C.-2, dated the 16th April, 1927, I have the honour to forward herewith a copy of a letter together with its enclosure received from the Kemmending Match Company, Limited, Rangoon, on the above subject.

Enclosure No. 1.

Copy of letter, dated the 22nd April, 1927, from the Kemmending Match Company, Limited, Rangoon, to the Collector of Customs, Rangoon.

We have the honour to refer to our representative's call on you to-day, when the question of Border Trade between China and Burma was discussed. In this connection we beg to enclose herewith copy of a letter received from our Chief Travelling Inspector, who has lately visited the places where this Boorder Trade is carried on. We believe that at present nothing can be done in the matter, but in view of the circumstances reported in the accompanying

letter, we trust that you will be able to do something, as this trade, if it increases as it is doing, is liable to seriously affect the importers who are paying a very high percentage of duty and who therefore should be protected as far as possible. We have the honour in consequence to approach you for your help and action in stopping this growing border trade.

Thanking you in advance for an early and favourable reply on this subject.

Enclosure No. 2.

Copy of letter from the Chief Travelling Inspector, dated the 16th April, 1927, Mandalay.

Border Trade between China and Burma.

I beg to submit a further report on the border trade between China and Burma, with regard to Kyaukme, Ksipaw, Lashio.

The dealers of these three towns report that approximately 5,000 tins of matches have been purchased from the Muleteers by the Chinese dealers of these towns during the month of March, and that this trade is regularly conducted between the months of December and middle of April each year.

In order to try and check the quantity mentioned above I visited all the dealers in each town on my outward journey and took their stocks and the same on my return journey shows the following:—

Kyaukme.—Outward journey, 55 tins. Return journey, 26 tins which shows that 29 tins were sold during 5 days.

Ksipaw.—Outward journey, 730 tins. Return journey 479 tins which shows that 251 tins were sold during 4 days.

Lashio.—Outward journey 79 tins, Return journey 60 tins, which shows that 19 tins were sold during 2 days.

Basing the monthly sales on the above figures, it is evident that approximately 2,334 tins of matches brought over the border have been sold in one month in the 3 towns mentioned above.

The dealers report that they do not expect further supplies until about the end of next December, as the rainy season is almost fast approaching and the Muleteers are returning to China before the rains.

These matches are brought over in tin packing already made up into packets for the Burma market. On the end of the tin is pasted a label written in Japanese, under which is a triangle with a capital "A" printed, and underneath that is written Hong Kong, with a small label the writing of which says Passed Matches, by the Nippon Match Manufacturers Association Inspection Bureau, Japan.

The above label shows that these matches are manufactured in Japan, and the dealers report that they are brought up by rail to Chieng Mai, which is the rail head, then on to Kenytung, and on by various routes through the jungle to Hsipaw.

While in Lashio, I called on one or two Government officials whose duty takes them to the Chinese frontier and surrounding jungle, and they report having seen large convoys of not less than 50 miles carrying matches, and which have been distributing from a town on the frontier called Mongnai. For purpose of calculating the quantity carried in each convoy, a mule carries six tins of matches, which brings the total seen in one convoy alone to 300 tins, and which the English official reports having seen such convoys on numerous occasions.

The last season shows another label being introduced into the Burma market, which is known in Chinese as "To Hoe" brand, but the dealers report unfavourably about this label and anticipate it will not be brought into this country during the next season.

I have despatched under separate cover a few samples of the match imported together with three ends of the tins they are packed in, which shows the above writings.

I find it very difficult to understand the actual routes taken by the Mule-teers, as the Chinese dealers each mention different routes and names of towns or villages, but the English officials of Lashio are of the opinion that Kentung and Mongnai would be suitable places to sit down and check the quantities arriving over the border, they also state that the routes over the border from Unan are very difficult to traverse, and they have not noticed any trade worth mentioning from this quarter.



COLLECTOR OF CUSTOMS, RANGOON.

B.—ORAL.

**Evidence of Mr. A. E. BOYD, Collector of Customs, recorded at
Rangoon on Wednesday, the 30th March, 1927.**

Introductory.

President.—Mr. Boyd, you are the Collector of Customs, Burma.

Mr. Boyd.—Yes.

President.—I suppose you have been to all the principal ports.

Mr. Boyd.—Yes.

President.—The Customs Department is entirely a Central Department, is it not?

Mr. Boyd.—Yes.

President.—You are directly under the control of the Government of India.

Mr. Boyd.—Under the Central Board of Revenue.

President.—You have been sending returns to the Government of India as regards the import of match wood for veneers and splints.

Mr. Boyd.—Yes.

President.—I suppose it would not be possible for you to do so with reference to the other raw materials, *e.g.*, chemicals because they will be used for other purposes.

Mr. Boyd.—We could not do that. They would not be bought entirely for match-making purposes.

President.—I suppose as regards that we can get information from the manufacturers of matches themselves.

Mr. Boyd.—Yes.

Method of levying the import duty on matches.

President.—There is at present a specific duty of Rs. 1-8-0 on matches. Now we have to consider whether having regard to the fact that the Government revenues have been dropping owing to the manufacture of matches in the country itself, it may not be necessary to levy some sort of excise.

President.—At present when you are levying the specific duty, do you take their declaration as to quantities, the origin of the country, etc.?

Mr. Boyd.—Supposing a consignment comes in, we examine a certain amount, break open some of the packages and count the actual number of boxes in a case and we charge duty on an average.

President.—Do you count the number of boxes?

Mr. Boyd.—We count the number of packets. We know how many packets go to a case.

President.—You actually count.

Mr. Boyd.—Yes, we count about 2 per cent.

Dr. Matthai.—How many boxes go to a packet?

Mr. Boyd.—10 boxes per packet. They are again made up in bigger tins. 120 packets to a tin and 6 tins to a case.

Dr. Matthai.—And the tin containing how many packets?

Mr. Boyd.—There are 50 gross of boxes to a case. Each case contains six tins. Thus it will come to 8½ gross to a tin.

President.—In some places they have got packets of 12. Here I think the packet contains 10 boxes.

Mr. Boyd.—Yes, that is so far as Burma is concerned.

President.—I suppose there is a declaration as to the country of origin.

Mr. Boyd.—Yes, the invoice shows that.

Levying an Excise duty.

President.—As regards the excise, there are several methods of levying the excise. There are three well known methods, first you can have the whole manufacture carried out in bond (that is obviously difficult in a country like India), second you can have a sort of bonded warehouse simply for the manufactured article in the factory itself. There is a third method which is prevalent in some parts, that is fixing of labels on every box.

Mr. Boyd.—That is not altogether safe. Your first method is, I think, in vogue in a cigar factory in Dindigul.

President.—You have got an officer in charge of that factory.

Mr. Boyd.—The manufacturing part of the factory is a bond. The other part where stores are kept is not. As tobacco is brought in, so much has to be passed into the bonded part out of which so many cheroots are made and weighed.

President.—There is an excise on the cheroot, but not on tobacco.

Mr. Boyd.—That is so.

President.—That is where you don't have to keep tobacco in a bonded warehouse.

Mr. Boyd.—Quite.

President.—That is all right where you have got a big factory, but where you have these tiny little things—where they manufacture part of the thing by machinery and hand that over to the outside people to finish the process—it would not be very easy.

Mr. Boyd.—I am not quite sure how that is done.

President.—There are two small factories. What they do is simply they make the veneers and the splints and they do the dipping which is done partly by machinery and partly by manual labour and they distribute the splints and the veneers to outside labourers to make the boxes, put on the labels, fill the boxes and bring them back to the factory. It will be very hard in this case. Even if you have a bonded warehouse you would not be able to apply that to such a factory. Of course there are bonded warehouses for salt.

President.—Therefore as far as I can see at present another alternative method would be the label business. I cannot think of any other method. Can you suggest any other method?

Mr. Boyd.—The label method can be evaded by any one wishing to cheat.

President.—Do you know what I mean, a band like the one you have on patent medicines. I have seen them on Continental matches and I believe in the Federated Malay States they have two different labels, one for matches manufactured out of indigenous materials and the other for matches made out of foreign materials.

Mr. Boyd.—I see difficulties in that method. If you paste 100 labels for 100 boxes, one or two labels may be damaged.

President.—Every manufacturer of matches will buy a stamp like postal stamps and the law will prohibit the sale of any matches which don't have this band intact round the match box. If they are damaged, Government will make arrangements to replace them.

Mr. Boyd.—We did it in Madras for sometimes when there was a lot of smuggling in matches. Every single packet was stamped. Any matches found in the bazar unstamped, were confiscated.

Dr. Matthai.—You tried this as a temporary measure.

Mr. Boyd.—Yes.

Mr. Mathias.—How did it work?

Mr. Boyd.—It worked well.

President.—In the label it would be easier still. You don't have to do anything yourself except to look at the matches.

Mr. Mathias.—How was your stamping done?

Mr. Boyd.—With a rubber stamp.

Mr. Mathias.—If it is to be a permanent measure, it is fairly easy to evade.

Mr. Boyd.—No.

Mr. Mathias.—The rubber stamp may be imitated.

Mr. Boyd.—No.

Mr. Mathias.—Supposing the stamping arrangements last for a couple of years, any one who wants to evade will only have to purchase matches with stamps on them and imitate. It may be very satisfactory as a temporary arrangement, but it can never remain as a permanent measure.

Mr. Boyd.—You can get over that. If anyone wants to do that, as far as the labels are concerned, we can simply take the labels and perforate them.

President.—Some means could be devised by which the labels could never be used again.

Mr. Boyd.—Yes, very easily. If necessary we can change the perforation. Only the man responsible will know it.

Dr. Matthai.—Would you have to have a special staff?

Mr. Boyd.—Yes.

President.—If we had this one for the excise, we can go to the Customs, otherwise the imported matches may be smuggled and they escape both the Customs and excise. If you have a system of labels, it will be quite easy to apply for both. The foreign manufacturer will only have to buy the labels.

Mr. Boyd.—It will mean a tremendous amount of work. Thousands of cases come in. They will have to be broken open and repacked. Who is going to pay for it?

President.—The labels will have to be fixed in the country of origin.

Mr. Boyd.—Do you mean where they are manufactured?

President.—Yes. They will have to buy from the Indian revenue authorities the necessary quantity of labels just as they will buy from the post office ordinary postage stamps. There may be forgery. In that case there may be forgery in the case of stamps too.

Dr. Matthai.—When you had this temporary system, did you have a special staff?

Mr. Boyd.—No, it only lasted for a short time.

Dr. Matthai.—How long did it last?

Mr. Boyd.—For a few months only.

President.—Do you know who manufactures these stamps in India?

Mr. Boyd.—I think that they are printed in Nasik.

President.—The label may be worth a pie or two pies. We have to minimise the cost of manufacturing labels as much as possible. If they can manufacture three pies stamps, there is no reason why the labels should cost more, because they will be thinner. If you had a band

Mr. Boyd.—Why not the stamp?

President.—The idea is that a stamp may be used again, as regards the label, if you tear the end, it is finished. The band will have to go right round

Mr. Boyd.—The manufacturers are not likely to do it.

President.—It is done in some countries. They have to do it.

Mr. Boyd.—Of course it can be done on the machine. If you make it a law of the country, they have to do it.

President.—Supposing we use these labels for excise and we did not have something on the same lines in the Customs, would there be any difficulty? Or do you suggest that the same sort of thing should be done as regards foreign matches?

Mr. Boyd.—So far as foreign matches are concerned, they are bound to come through us.

President.—As regards the inspection of a *panwalla's* or *bidiwalla's* shop, might not there be some difficulty? They may use these and put Indian matches in them and sell them as foreign matches entirely. It is possible that they may collect these boxes.

Mr. Boyd.—There will be two different sets of matches on the market, one with the labels and the other without.

President.—There is no reason why foreign matches should be exempted from the use of the labels?

Mr. Boyd.—I am not sure if you can make them pay the excise duty. I think you had better leave the foreign matches alone. Don't bother about them.

President.—The conditions of manufacture are such that we could not really levy the excise at the source.

Mr. Boyd.—Then, you put it the other way "if you want us to help your industry, you have got to help us by altering your method of manufacture and thus making it convenient for us to check."

President.—These small factories have sprung up all over the country. Unless Government decide to close them down on some understanding with these factories, it would, I think, be very difficult.

Mr. Boyd.—How many of these factories are there?

President.—There are only four in Burma but there are nearly 150 in India in all.

Mr. Boyd.—As far as Burma is concerned, we should probably be able to do it.

President.—But there is nothing to prevent other factories from springing up.

Mr. Mathias.—Have you had any experience of the cotton excise?

Mr. Boyd.—No.

Mr. Mathias.—Are there any cotton factories here?

Mr. Boyd.—No.

Mr. Mathias.—In Bombay do you know who supervised the collection of the cotton excise?

Mr. Boyd.—The Commissioner of Excise, Bombay.

President.—In a cotton factory all the processes would be ordinarily finished in the factory itself.

Mr. Boyd.—That is so.

President.—When these things (veneers, etc.) are passed out, what can you do?

Mr. Boyd.—I am afraid that if Government want to help factories, they must conform to certain regulations.

President.—If the country decides to have cottage industries to give employment to outside labour, they will say "we do not want to discontinue that, if there is some other method by which the industry can be allowed to continue on its present lines and the revenue protected".

Mr. Boyd.—Then, you can introduce the band.

President.—The band system may have another advantage if it is applied to the Customs. You may be able to tackle the question of smuggling from non-Indian States and other places if you insist on the band being put on.

Mr. Boyd.—We know that here as far as Customs is concerned, if it is from India, we don't bother but if any foreign goods come we do.

President.—Even if it escapes through the Customs barrier, if the law provides that no matches shall be sold in the country without the band, it may be very difficult to bring them in.

Mr. Boyd.—You can do it all right as far as foreign ones are concerned.

President.—They have to purchase their stamps from India.

Mr. Boyd.—Yes.

President.—Then, they will have to get them exported to India.

Mr. Boyd.—They are not going to pay the excise duty. They are going to pay only the import duty. They will have to get the same sort of labels. They would supply their own labels. They would not buy them from India.

President.—They will label them in this way. You would not admit them into India, if they have not paid the duty. If they smuggle them in having purchased the labels in India they will bear the label whether they pay the duty or not.

Mr. Boyd.—They would not pay the duty on the label. The label would not bear the duty. But we would charge the duty.

Mr. Mathias.—When they come through Kathiawar they still have labels on. They don't pay the same duty. They are smuggled in bearing the labels.

Mr. Boyd.—That is up against the land frontier between Kathiawar and Bombay.

Mr. Mathias.—The label won't help you to differentiate between smuggled and non-smuggled.

Mr. Boyd.—Not as far as smuggling is concerned.

President.—If you compel them to buy the stamps from revenue authorities, they must bear the labels.

Mr. Boyd.—You must put the duty accordingly.

President.—In the duty the cost of label is included. Supposing 100 labels are going to cost one anna, then the duty will be Rs. 1-9-0 (Rs. 1-8-0 which is the present duty plus one anna the cost of labels). Each label will bear 100th part of that figure.

Mr. Boyd.—It will be a job. There will be somebody out here who will have many millions of these labels to keep the factories well supplied with them.

Mr. Mathias.—They will have to put these labels on some of the boxes and not on others.

Mr. Boyd.—They would have to manufacture certain cases for India alone.

President.—It is like this. There will be a continuous band round the box. The label will have to be printed in that form. If you simply add a little to the cost, if they wish to sell their matches in this country, under the law they will have to accept that condition. Supposing we are not able to devise any other method of protecting either the Customs or the excise there is no other alternative.

Mr. Boyd.—What you want to get at is that all matches made in this country pay the excise duty.

President.—Yes and also all matches coming into the country must pay the excise duty.

Mr. Boyd.—That is arranged here. All matches coming into the country pay the duty.

President.—That is true. But there is increasing evidence that there is evasion of the Customs duty in some parts of India.

Mr. Boyd.—Over the land frontier and not in the main ports.

President.—In Kathiawar there are ports.

Mr. Boyd.—That is the difficulty.

President.—It may be the land frontier or it may be the sea frontier. There may be smuggling through small ports or landing places.

Mr. Boyd.—I should like to think it over and let you know.

President.—Your opinion will be particularly valuable. You have been in Bombay where these difficulties have arisen and are every day getting bigger and bigger. There are three points: as regards customs, how to protect the Customs; then, there is the excise and then there is the question of how to prevent the evasion of the excise or the Customs.

Mr. Boyd.—Yes.

President.—In the case of labels, you will consider whether the labels might be used more than once.

The prevention of smuggling.

When you gave evidence before the Taxation Enquiry Committee, you made some remarks about smuggling. I should like to know your experience as regards that in India as well as here.

Mr. Boyd.—In what way?

President.—They say "The most difficult of the problems of prevention is, however, that of protecting the land frontiers, and it is here that smuggling, particularly of matches, cigarettes, saccharine and gold thread, has been most marked."

President.—Is it your experience that smuggling on a large scale is being carried on.

Mr. Boyd.—It certainly was when I was in Bombay, and in Madras they had smuggling on the Pondicherry frontier and Karikal. These were very open. Pondicherry is roughly 100 and Karikal 40 to 50 miles and there was smuggling of matches and gold thread specially.

Mr. Mathias.—Could you give us an idea of the actual quantity of matches smuggled?

Mr. Boyd.—Not of matches only, but we calculated that Government was losing about 7 to 8 lakhs of rupees a year by smuggling.

Mr. Mathias.—You could not calculate the amount on matches only?

Mr. Boyd.—We could have. I took Mr. Campbell to these parts and every place we went was full of matches.

Dr. Matthai.—How long ago was that?

Mr. Boyd.—It was in October 1923. The Government of India asked me to go over these places and put forward suggestions how to guard the frontiers.

President.—I think in a case like that I think the label business might help you more than stamps? It does not matter where they come from.

Mr. Boyd.—They may come from the French territory.

President.—How can they be sold in India even if they came from the French territory if there is any label? The man who is in possession of foreign matches without labels is liable to prosecution.

Mr. Boyd.—Supposing a firm sends out a certain consignment of matches to Pondicherry. The French territory is not guided by our regulations at all. Then they are landed at Pondicherry and come to British India by crossing the frontier.

President.—If you come across matches which do not contain labels, you will ask the man how he got them. If his matches does not bear a particular label he is liable to be prosecuted. He can't say that he has paid the duty unless the label is there.

Mr. Boyd.—The manufacturer would have to put on labels for India not for France.

President.—If any man bought in matches in French territory and brought them into British India he must label them in order to sell them.

Mr. Boyd.—They would not do it. They would try and get the matches across the frontier and take a chance whether they are caught or not.

President.—Your difficulty is greater to-day because there is nothing to show on the boxes whether the duty has been paid or not, but in the other case there would not be this difficulty, because there will be this label to show that.

Mr. Boyd.—From a practical point of view that can never be done.

President.—The moment you see a match box without a label you say it is smuggled and you proceed against that man; that is evidence of smuggling. But to-day if a man is found in possession of a match box without a label you can't say that he has smuggled it.

Mr. Boyd.—It all depends on whether stamping is still in force or not. Everything that came to the frontier was stamped and passed and we used to raid the villages round the frontier.

Mr. Mathias.—You mean to say you opened all the packages and stamped the whole lot?

Mr. Boyd.—Yes, we had double staff to carry on the work at that frontier and the result was that we had to go round and raid these villages and sometimes came across godowns full of matches, sometimes thousands of them. You are not going to do that in frontier like this.

President.—What is the land frontier in Burma?

Mr. Boyd.—A thousand miles.

President.—Is there much evidence of smuggling through the land frontier?

Mr. Boyd.—Not matches. I wrote up to the Shan States and enquired whether they had any information, but they told me that there was nothing much coming through. I keep on asking the Superintendent, Shan States. He informs me that there is no instance of matches or cotton goods being smuggled into the Shan States from China. There were instances of small quantities of matches being smuggled through from Siam but the amount was very small and we have not kept a record.

Mr. Mathias.—Is there any smuggling by land?

Is there any duty on matches imported by land?

Mr. Boyd.—A little from Siam. All goods coming from the northern frontier bear no duty at all. I pointed this out to Government. I told Sir William Keith and Government that, if the Chinese once wake up to the fact that every inch of Burma was free, that would be a serious thing. Even as far as Bhamo goods come in duty free from Siam. It is perfectly legitimate, I can't do anything. You may see the same thing done one of these days through the north as regards matches or anything else, and it is perfectly legitimate.

President.—What about these smaller places in the Archipelago? Is there evidence of much smuggling?

Mr. Boyd.—A certain amount; we cannot tell how much there is as it is absolutely impossible to check. They can bring a certain amount round Siam; they can ship it anywhere round the coast, it is impossible to check them. They can get the things into Siam and get them into Burma.

President.—If the State itself was concerned the British Government could always arrange to enter into arrangements by which to protect its revenue, but if the State does so in collusion, it becomes more difficult. Take Siam, for instance, it may be that the State itself would not be in favour of smuggling, but when a smaller State is concerned which is in collusion with the smuggler

then the problem is more difficult. But so far as Burma is concerned you have not that problem, namely a state acting in collusion with the smuggler.

Mr. Boyd.—China is too hard pressed now. She cannot afford to do it and the distance is great and transport is expensive. Where the danger will come in is that they are working for roads from Rangoon to Tengyueh.

President.—What is the distance?

Mr. Boyd.—It is a fortnight's run by pack mule. That road goes right up to Yunan, but roads are not very good from Yunan to the Hinterland, but when they have got good roads, then you will get Chinese matches coming out duty free. There are some already coming in but their quantity is very small.

President.—The real danger may arise from the Straits and Siam where there is better communication between Toungoo and Burma.

Mr. Boyd.—They get cigarettes to Bangkok from Singapore and then they come to Kumkarick by pack mules and from there to Rangoon by train. It is not very far, it takes about 10 days. They are able to under-sell everybody here. I had a million and a half of 555 cigarettes in my office which were being sold at 10 annas a tin and they were coming *via* Bangkok.

President.—What we are concerned with is the larger question of policy. We have to consider whether there is any possibility of smuggling and if there was to be both excise and customs what kind of label we should suggest. As regards the treaties of course we can only point out.

Mr. Boyd.—It does not extend to the Shan States.

President.—Supposing any article is manufactured in Shan States and comes into British territory.

Mr. Boyd.—It is all right, it is British India.

President.—Would you be able to levy excise duty on matches in Shan States?

Mr. Boyd.—Yes, if it is introduced under the heading "applicable to the whole of British India."

President.—The duty will be leviable.

Mr. Boyd.—Yes.

President.—There would be no question of customs.

Mr. Boyd.—No, because it is part of British India.

President.—Haven't they got any such rights as the Indian States?

Mr. Boyd.—I am not quite sure.

President.—In Kathiawad, for instance, some of them are a sort of ruling chiefs

Mr. Boyd.—Yes.

Mr. Mathias.—Have they excise rights?

Mr. Boyd.—I could not tell you.

President.—If they had excise rights, there would be customs barriers too.

Mr. Boyd.—The only place we have Customs at all is the railway line? Excise don't function in the Shan States at all. That is what they have told me. As far as I can make out, practically nothing comes out in the way of matches. There may be a small quantity of matches coming in to be sold in the villages, but not much.

Dr. Matthai.—Do they smuggle matches in small packets?

Mr. Boyd.—Yes.

President.—Now, according to the Taxation Enquiry Committee's report, they have altered the law in 1924 as regards the land frontiers.

Mr. Boyd.—Yes.

President.—So that all the penalties now applicable to Sea Customs, are also applicable to land customs?

Mr. Boyd.—Yes, most important ones anyhow.

President.—You can levy the duty.

Mr. Boyd.—Yes.

President.—Is the bringing of goods without duty punishable?

Mr. Boyd.—Yes, these are the three sanctions, search, confiscation, and seizure.

President.—The two systems have been more or less assimilated.

Mr. Boyd.—They have brought the Sea Customs to apply to land customs.

President.—Is there any important provision under the Sea Customs which has not been extended to land customs?

Mr. Boyd.—I don't think so. They have given me all the power they can.

President.—Then the two big land frontiers are the Siamese frontier and the Chinese frontier.

Mr. Boyd.—Yes.

President.—And you have got very little establishment to look after the collection of the duty.

Mr. Boyd.—None at all.

President.—Who does this work for you?

Mr. Boyd.—I have got many men at Moulmein to watch the things coming in there. If I see anything coming on, I appoint a man as a Land Customs Officer and ask him to go up to Moulmein and stop. I have got no special staff under me for this. I simply utilise my Sea Customs Officers.

President.—Apparently at present so far as matches are concerned the smuggling is not on a sufficiently large scale to justify any special measures.

Mr. Boyd.—Quite.

President.—But it may develop.

Mr. Boyd.—I doubt if it will develop at all.

President.—I mean to say smuggling would not be profitable.

Mr. Boyd.—On matches there is a higher tariff but they are bulky.

President.—It would not be anything like what you found in the French territory.

Mr. Boyd.—No, their trouble is actually in Pondicherry. On the frontier there are one or two places. We have got a house part of which is French and part of which is English. That is why we have got a regular corps all the way round. Here we cannot get, because we have 100 miles of unchartered land.

Dr. Matthai.—They have brought it fairly under control on the frontier.

Mr. Boyd.—Yes. We have got a signed agreement.

President.—Would it be difficult for you to collect figures in future as regards the imports of these chemicals for the manufacture of matches with regard to the country of origin?

As regards the three principal raw materials, *viz.*, logs, splints and veneers, can you tell us where they come from?

Mr. Boyd.—We will send you a statement showing the amount of logs, splints, veneers and matches and also the countries of origin. Sweden and Japan are the chief countries. The other countries come to practically nothing.

Dr. Matthai.—As regards the figures about matches, how do they get the value of matches?

Mr. Boyd.—It is all invoice price.

Dr. Matthai.—Does it include landing charges?

Mr. Boyd.—It includes everything, landing charges, port dues, etc.

Mr. Mathias.—Does landing charge amount to 4 per cent. of the c.i.f. price?

Mr. Boyd.— $\frac{1}{2}$ per cent. on the value.

President.—When you charge *ad valorem* duty on top of that you can either charge on the market value or on the landed value i.e., c.i.f. *plus* landing and other charges.

Mr. Garraty.—Yes.

President.—What I wish to know is does the question of exchange enter here?

Mr. Garraty.—Everything.

President.—You take the declared value.

Mr. Garraty.—Not whatever he declares.

President.—When you believe that the declared value is correct, you take that.

Mr. Garraty.—Yes.

President.—So that the value shown there would be correct according to the current rate of exchange.

Mr. Garraty.—Yes.

Mr. Mathias.—Do you take it at any fixed rate?

Mr. Garraty.—We get the rate supplied by the Bank and check it.

President.—You convert it into rupees.

Mr. Garraty.—Yes, in every case.

Dr. Matthai.—I find from the trade returns that Ceylon exported in 1925-26 to India 15,700 gross whose value is given as Rs. 13,000. It comes to less than a rupee per gross. Whereas in every other case it is very much more than that. I was wondering whether there was any mistake about that.

Mr. Boyd.—There must be some mistake.

Dr. Matthai.—Matches imported from the Federated Malaya States, are they all Japanese matches?

Mr. Boyd.—I could not tell you off-hand.

President.—As regards foreign exchanges, I always understood that whatever the currency in which the transaction was done, the invoice would ordinarily contain the value in sterling. I don't know about Japan.

Mr. Garraty.—No, we get French invoices giving the value in franc.

President.—Do you?

Mr. Garraty.—Yes. It is only in the case of German goods that the value is given in sterling.

President.—In the case of steel we found that prices were generally quoted in sterling—no matter where the steel products came from.

Mr. Garraty.—Yes, that is as far as the Continent is concerned. But as regards America and Japan, they quote in their own currency.

President.—As far as matches are concerned, the principal country from which they are imported is Sweden. Are Swedish invoices in Swedish currency?

Mr. Garraty.—Yes.

President.—The Swedish exchange is more or less stabilised and you don't have much trouble.

Mr. Garraty.—No.

President.—But as regards Japan, the exchange fluctuates.

Mr. Garraty.—We get exchange rates every day from the Bank.

Dr. Matthai.—The Japanese exchange is fairly steady now.

Mr. Garraty.—Yes.

President.—You have no difficulty in ascertaining the actual value as far as exchange is concerned.

Mr. Garraty.—No.

President.—You say that the local wholesale price of Japanese matches is between Rs. 110 to Rs. 120.

Mr. Garraty.—Yes.

President.—Is that including the duty?

Mr. Garraty.—Yes.

President.—How do you get the wholesale price?

Mr. Garraty.—We get it from the market.

President.—The wholesale price of Rs. 110 to Rs. 120 would mean that the landed price is Rs. 35 to Rs. 45.

Mr. Garraty.—Yes, there is a duty of Rs. 75 on that.

President.—That is very much less than the figures suggest. Apparently the position is that the Japanese manufacturers pay part of the Customs duty.

Mr. Garraty.—I do not know how they are doing it. I cannot understand it myself.

Dr. Matthai.—When did you collect the selling price?

Mr. Garraty.—Just a few days ago. It is most extraordinary how the Japanese can do it.

President.—Then the cost of Swedish matches is about Rs. 45 to Rs. 50 and the wholesale selling rate is about Rs. 130 to Rs. 135.

Mr. Garraty.—Yes.

President.—They get a little more. They cover the duty anyhow. But in the case of Japanese manufacturers they sell below the import price.

Mr. Garraty.—This is the information that I got from the market myself.

Dr. Matthai.—When you collect the prices, do you collect them for full size boxes?

Mr. Garraty.—We get only one size of boxes from Japan. The Swedish price is 1s. 6d. per gross.

Mr. Mathias.—That is equal to one rupee. Is that the invoice price?

Mr. Garraty.—It is the landed cost.

President.—In their case they make the consumer pay the whole of the duty. But in the case of the Japanese manufacturers I am not so sure.

Dr. Matthai.—The difference between Swedish and Japanese prices is about four annas a gross.

Mr. Garraty.—Yes.

Dr. Matthai.—One of the manufacturers who appeared before us last week told us that the Japanese and Swedish matches were selling at about the same price.

Mr. Garraty.—The Japanese matches are sold at a lower rate.

Mr. Mathias.—You say that the Japanese matches are imported at Rs. 110 per 50 gross. If you deduct the duty, it comes to Rs. 35; whereas Swedish matches are imported at Rs. 130 and if you deduct the duty from that, it comes to Rs. 55. Your invoice price is one rupee.

Mr. Garraty.—That comes to Rs. 50.

Mr. Mathias.—In the case of Japanese matches there is no allowance for profit.

Mr. Garraty.—These are wholesale prices.

Mr. Mathias.—The point I am getting at is this. According to your figures the wholesaler makes Rs. 5 profit on the Swedish matches and he makes no profit on the Japanese matches.

Mr. Garraty.—He will probably get a commission at the end of the year.

Mr. Mathias.—It seems strange that they should make no profit.

President.—I want to be quite sure about this point. It is rather interesting. You have given the wholesale price of Japanese matches as Rs. 110 to

Rs. 120. Then you deduct the duty of Rs. 75 from that and give Rs. 35 to Rs. 40 as the c.i.f. price. The c.i.f. price is very much lower than the figures for the last 10 months suggest.

Mr. Garraty.—On account of the Swedish competition I suppose that the Japanese matches are selling very cheap.

Dr. Matthai.—Were their prices higher sometime ago?

Mr. Garraty.—They are fluctuating.

Dr. Matthai.—Has there been a marked fall?

Mr. Garraty.—Ever since Swedish matches began coming in, the Japanese prices began to fall.

Dr. Matthai.—I want to know whether there has been a marked fall recently?

Mr. Garraty.—These figures appear to be correct for the last two months.

President.—Can you give me the prices for the last two years month by month?

Mr. Garraty.—It will be a big undertaking to do that. I can give you the average price for the year if you want.

President.—What was the average price for 1925-26 for Japanese matches?

Mr. Garraty.—751,000 gross at Rs. 9,62,000.

President.—That is the import price.

Mr. Garraty.—Yes.

President.—I am now asking you about the wholesale price.

Mr. Garraty.—There is not the slightest doubt that the prices of Japanese matches have fallen considerably during the last year or two. Japan cannot compete against Sweden. Consequently she has got to sell as low as she possibly can.

President.—Has not also the Swedish price dropped?

Mr. Garraty.—The price of Swedish matches has been dropping too.

President.—I think that you are going to give us those figures. The local prices apparently are lower than those in India. At any rate they are certainly lower than the average prices for all India.

Mr. Garraty.—They would be lower.

Mr. Garraty.—I have got a figure of Rs. 125 for 50 gross for Swedish matches, that is Rs. 2-8-0 per gross.

Mr. Mathias.—Rs. 2-11-0 is our figure, so that Swedish matches sell at cheaper in Bombay than in Rangoon.

President.—This information that we are giving now is correct because the manager of the Swedish Match Company told us that the price was Rs. 132 for 50 gross.

Mr. Garraty.—That includes the landing charges.

President.—If you could send us the Swedish and Japanese wholesale and c.i.f. landed prices it would be of use to us. We want to see if any part of the duty is really paid by the manufacturer.

Mr. Garraty.—I will send you the information.

Collector of Customs, Bombay.

A.—WRITTEN.

(1) *Letter, dated the 7th December 1927.*

As promised, I send you a few notes about matches. Enclosed please find five copies.

NOTES ON MATCHES.

In the course of an informal discussion with the President and members of the Tariff Board I promised to submit a short note before offering myself as a witness and I also promised to supply certain figures.

(1) Figures showing transshipment and re-export of matches to Indian States, and to Goa, etc.—Please see Statements A, A¹, A², and A³.

(2) Figures for imports of matches into Bombay during October.—Please see Statement B. (Figures for November, December, January and February will be sent.)

(3) The value of the total imports of matches into India for ten years previous to 1910-11 (only values are available).—See Statement C.

I also promised to ascertain whether figures for imports in the monthly trade reports included the figures for goods bonded; the figures include goods passed into bond, and *not* goods passed out of bond.

The following notes may contain items of interest to the Board.

At present the only three foreign countries exporting matches to Bombay are Scandinavia and Czecho-Slovakia and Austria. Japan used to send out matches in previous years but last year only about 50 cases, of which particulars are not available, were received here.

I.—SCANDINAVIAN MATCHES “SAFETY”

(a) *Invoice value—*

Size $\frac{1}{4}$ —1s. 2d. c.i.f. per gross.

Size $\frac{3}{4}$ —1s. 6d. c.i.f. per gross.

Packing.—For $\frac{1}{4}$ inch the case contains 100 gross.

Specification as under:—

Tin lined case containing 200 big packets, each of 6 small packets, each small packet containing 1 doz. match boxes, each box of an average number of 65 sticks.

For $\frac{3}{4}$ inch the case contains 50 gross, with the same specification as above but the number of big packets is 100 and the number of sticks is 75 to 78.

SCANDINAVIAN MATCHES—SULPHUR.

Invoice value—

Size $\frac{1}{4}$ —1s. 2d. per gross c.i.f.

Size $\frac{3}{4}$ —1s. 6d. per gross c.i.f.

Size 1/1—1s. 8d. per gross c.i.f.

Packing—

For $\frac{1}{4}$ size—100 gross to a case. Specification as above. No. of sticks 67.

For $\frac{3}{4}$ size—50 gross to a case. Specification as above. No. of sticks 70/72.

For 1/1 size—50 gross to a case. Specification as above. No. of sticks 76.

II.—CZECHO-SLOVAKIAN AND AUSTRIAN MATCHES.

We get only "Safeties" from this country.

(a) Invoice value—

Size $\frac{1}{2}$ (also known as $\frac{3}{4}$)—1s. to 1s. 2d. per gross c.i.f.

Size $\frac{3}{4}$ —1s. 2d. to 1s. 4d. per gross c.i.f.

Packing.—For $\frac{1}{2}$ size a case may contain 50, 75 or 100 gross but the last packing is preferred commonly.

Specification.—Tin lined case containing 100 big packets, each of 6 small packets, each small packet of 1 doz. match boxes—each match box of 65 sticks on an average.

For 75 and 100 gross cases the packing is as above with the difference that the number of big packets is 150 and 200 respectively.

For $\frac{3}{4}$ inch size the packing is a tin lined case of 50 gross with specification as above and the number of sticks the same on an average.

III.—EXTENT OF EXAMINATION.

5 per cent. of the total number of packages covered by a bill of entry are ordinarily examined.

For the details please see paragraph (c), page 118, Bombay Appraisers' Manual, 1923 (as subsequently amended).—Extract attached marked D.

IV.—LIMIT OF SINGLE CONSIGNMENT.

Scandinavian matches are imported solely by the Western India Match Company and they have not been noticed to import at a time less than 400 cases.

The limit of a consignment of Czecho-Slovakian and Austrian matches is generally 125 to 150 cases. The total annual import is about a thousand cases.

All these consignments are usually bonded. Czecho-Slovakian and Austrian matches are not marketed in Bombay but are sold to customers up the Gulf, and Arabian ports, direct from bond.

The Western India Match Company bond their matches and then take delivery or give delivery to customers from bond on payment of duty.

I have extracted from the Ceylon Customs returns figures for imports of matches into Ceylon for six years. (See Statement H.). They represent a steady increase which may be due to normal increase in consumption, or may not be entirely disconnected with the fact that Colombo is geographically near enough to be a smuggling base.

I believe that the Central Board of Revenue may have figures showing the traffic in matches by rail from Kathiawar to British India, but it must be understood that these matches are not smuggled since the States were under obligation to charge British Indian rates of duty. The Collector of Salt Revenue, Bombay, will be able to give figures for imports by land since the re-imposition of the Virangam Line.

I have read some of the evidence (Mr. Boyd's) tendered to the Board, and cover in the following note the general ground then traversed.

I am assuming that the merits of the policy of levying an excise duty is not under consideration, and that the question is merely one of considering whether, for revenue purposes, such a duty should be levied and can be collected.

The packing of matches as imported for Bombay and the percentage of examination have been reported *supra*.

It is only partly correct to say that unstamped matches found in the bazaar were confiscated. We were never in the position to put the "onus of proof" on the owner; if we found unstamped matches we raised the presumption that they had been smuggled, if the owner made untrue statements, we were probably able to prove his state-

ments were false and so to justify confiscation, but in cases in which the owner insisted on our proving our case we were not always successful. In the case of saccharin and gold thread the risk of imitation of the rubber stamp was reduced by requiring the Customs officer to sign or initial the impression—such a course would be out of the question in the case of matches.

In no circumstances could we undertake to do excise work up-country; as a general rule we have neither the executive nor the administrative staff.

If labels are fixed in the country of origin we can make a percentage examination to check the existence of labels. Climatic and other conditions are against opening all cases.

A thin stamp if gummed on is likely to become damaged and so incapable of frequent use.

The outside covers of packets bearing the Customs stamp had a market value around Pondicherry.

It is, I believe, usual for sellers of smuggled saccharin to acquire a few duty-paid tins for display and to sell to customers smuggled tins at a lower rate.

Cotton excise duty used to be collected by the Collector of Bombay in Bombay, and by the Collector of Customs, Madras, in Madras.

I think it is unlikely that matches are smuggled in Bombay itself; they are too bulky; I cannot speak for outports in the Presidency or on the land frontiers since I am not responsible for them; Mr. Boyd's experience of Bombay is not more recent than 1909 when it was not worth while to smuggle matches.

The President is, I think, misinformed in regard to the liability to prosecution of the man in possession of matches without a label or stamp—legislation would be necessary as is under consideration in the case of saccharin.

I think that round Pondicherry the packets were never opened so that the boxes could be stamped.

The Land Customs Act of 1924 does not apply to the Kathiawar frontier—See Section 2 (e) (f) and (g) of Act XIX of 1924. Only the Act XXIX of 1857, in which, I believe, the powers are inadequate, applies.

The Board has been supplied by my office with figures of logs, splints and veneers.

The figures for values of imports of matches in Bombay represent "real value" (as defined by the Sea Customs Act) i.e., are the wholesale rates in the market in Bombay less the amount of duty and are not invoice values; the same is probably the case in other large ports (including Rangoon).

STAMPS IN PAYMENT OF CUSTOMS AND EXCISE DUTIES.

As I understand the position regarding labels it is that the Board is considering the possibility of arranging for all matches, both imported and indigenous, to be labelled so that it may be possible by legislation to provide for a penalty for selling or offering for sale an unlabelled box of matches.

The two points to be attained are (1) the collection of excise by means of stamps and (2) the prevention of smuggling which would render the detection of purveyors of unlabelled indigenous matches more difficult.

The Tariff Board would I believe like the stamps to have a face value and to provide for the stamps to be obtainable from certain agencies of the Government of India.

So far as Customs is concerned I would prefer to be left with the duty of collecting cash on each consignment and of seeing that any desired label was fixed—the alternative would probably necessitate much greater examination or the scrutiny of vouchers; it would also put a premium on the forgoing of labels. Incidentally the holding of large stocks by manufacturers would tend to operate against frequent changes in design to reduce fraud.

I suggest for consideration prohibiting under Section 19 of the Sea Customs Act the importation of matches which are not in containers bearing the name and address of the manufacturer, and requiring local manufacturers of matches to label their matches similarly. If those labels are forged in India honest manufacturers will prosecute infringements of their labels and can do so under Section 3 of the Merchandise Marks Act. We should still have to deal with local manufacturers who put on a purely fictitious label (purporting to be the manufacture of a firm which actually did not exist), in which case there would be no aggrieved person, other than Government, to institute proceedings.

The type of label to be used must of necessity be easily forged—it is irrelevant to argue that quarter anna stamps are not forged because such stamps would have to be imported into India in sheets, or forged in India and the consequent risk of detection would be great.

Stamps affixed on imported matches are not likely to be of any real use to prevent smuggling unless the law is amended and unless steps are taken to give the stamp a monetary value for payment of duty (in which case much care to detect forgeries will become essential).

I am not convinced that the loss of revenue on matches smuggled is now really very high or high enough to justify the institution of a system which is going to be distinctly troublesome; it is quite possible that the loss due to smuggling of other commodities is greater.

The enforcement of labelling will probably fall very largely on local Government officers for whose services the Central Government will have to pay; would it not be as cheap or cheaper and as effective to provide for payment by the factories concerned on a return to be filed by them? The returns could be checked by occasional inspection of books and stocks of veneers, chemicals, timber, etc.,—the number of factories is limited; of these the largest are likely to be run on lines that would render fraud out of the question; the others probably produce so few matches as to make the loss due to fraud trivial. It would be easy to arrange for returns of all imports of match-timber, veneers, and certain chemicals, so that the existence of any considerable fraud in returns by companies would soon become apparent.

C. R. WATKINS,

Collector of Customs, Bombay.

NEW CUSTOM HOUSE,
Bombay, 7th December 1927.

Extract sub-paragraph (c), page 118, of the Bombay Appraisers' Manual, 1923 (as subsequently amended).

“(1) The Examining Appraiser will on presentation of a bill of entry for matches, personally inspect the lot and select 5 per cent. of the whole lot covered by the bill of entry for examination and check count.

(2) The Examining Appraiser will have the cases so selected opened for examination, ascertain the number of gross packets in each case and count the sticks contained in three or more up to 6 match boxes to be taken from the different packets and thus ascertain the average number of sticks per match box.

(3) If the average number of sticks per match box is found to be not more than 100 sticks each, the rate of duty will be Rs. 1-8-0 per gross of match boxes under sub-head 1 of article 123 of the Tariff Schedule No. II.

(4) If the average number per box is more than 100 sticks the consignment will be dutiable under sub-head II of the same article and then the Examining Appraiser will calculate the total number of sticks per case and in the whole consignment on the basis divide it by 25 on the supposition that the case contains boxes of 25 sticks each and on the number of boxes so ascer-

tained, the rate of duty will be annas six per gross of boxes; or to adopt a similar method, the total number of sticks in the whole consignment, calculated as above, may be divided by 3,600 to give the exact amount of duty.

(5) If the importer is not satisfied with the result of such an examination or if the quantity of matches found in any cases exceeds the quantity declared in the bill of entry by 3 per cent., the importers will be referred to the Head Examiner who on being satisfied as to the necessity may allow a further 5 per cent. of the cases to be examined. Even after such further examination if the percentage of increase remains the same or if the importer is not satisfied, Head Examiner will obtain orders from the Assistant Collector.

In the monsoons matches should be given precedence for the purpose of examination over other goods, and bills of entry treated as urgent in all Departments."



सत्यमेव जयते

A.

Statement showing the figures of Matches re-exported to Indian States and to Indian ports not British from British India during the years 1921-22 to 1925-26.

	1921-22.		1922-23.		1923-24.		1924-25.		1925-26.	
	Gross of Boxes.	Rs.	Gross of Boxes.	Rs.	Gross of Boxes.	Rs.	Gross of Boxes.	Rs.	Gross of Boxes.	Rs.
<i>Indian States.</i>										
Cutch . . .	36,575	70,758	554	1,483	104	195	...	...	240	480
Kathiawar . . .	248,045	4,73,950	188,42	4,15,532	38,038	2,02,232	46,980	97,307	15,911	34,929
Foreign Konkan .	4,192	8,039	5,251	11,272	4,345	10,119	3,235	7,027	864	1,912
Gaikwar's Territory .	3,275	6,210	2,100	4,300	13,425	31,187	900	2,225		
<i>Indian Ports not British.</i>										
Goa . . .	12,850	1,91,801	99,850	1,07,196	170,406	2,05,642	112,350	1,19,740	130,200	1,26,824
Daman . . .	4,500	7,400	29,725	32,225	42,500	46,380	97,600	99,594	16,875	28,563
Other Indian Ports not British.	2,255	4,297	2,519	5,976	2,285	5,640	9,487	22,925	3,230	8,000

A-1.

Statement showing the figures of Matches transhipped to Indian States (Kathiawar ports) and to foreign ports in British India, at Bombay.

	1920-21.	1921-22	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.	April 1927 to October 1927.
	Cases.	Cases.	Cases.	Cases.	Cases.	Cases.	Cases.	Cases.
Kathiawar Ports.								
Bhavnagar	25	50	10	...	...	...
Porebunder	50	25	135	160	175	40
Jamnagar	1,334	...	555	667	2,305	...
Verawal	35	89	295	347	125	40
Navlakhi		348	...	65	40	...
Mangrol		75	104	600	50	...
Navabunder
Dwarka	24	...
Okha	243	...
Total	1,444	587	1,099	1,839	2,962	80
Foreign Ports.								
Marmagao	96	785	265	1	37	...
Daman

A-2.

Statement showing the re-exports of foreign matches to foreign countries from the Bombay Presidency during the Month of October, 1927.

	Gross of boxes.	Rs.
Aden and Dependencies . . .	250	625
Bahrein Islands . . .	2,000	5,000
Muskat Territory and Trucial Oman . . .	500	1,250
Persia . . .	5,500	13,200
Portuguese East Africa . . .	2,700	6,150
TOTAL . . .	10,950	26,225

A-3.

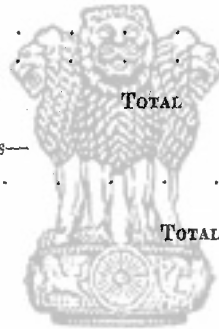
Statement showing the quantity and value of matches of foreign merchandise, exported coastwise to Indian ports from the Presidency of Bombay excluding Sind in the month of October, 1927.

	Gross of boxes.	Rs.
<i>Matches—</i>		
Madras Presidency	500	750
British ports within the Presidency	1,820	4,026
<i>Kathiawar—</i>		
Bhavnagar	1,000	876
TOTAL	3,320	5,652

B.

Statement showing the imports of matches from foreign countries into the Bombay Presidency excluding Sind during the month of October 1927.

	Gross of boxes.	Rs.
<i>Matches, safety—</i>		
United Kingdom	28	74
Czechoslovakia	2,500	2,500
TOTAL	2,528	2,574
<i>Matches, other sorts—</i>		
United Kingdom	30	99
TOTAL	30	99



सत्यमेव जयते

Statement showing the imports of matches into British India from foreign countries during the years 1900-01 to 1909-10.

	1900-01.	1901-02.	1902-03.	1903-04.	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.	1909-10.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Matches . . .	30,80,573	43,65,854	45,76,378	58,61,057	48,95,283	58,83,251	63,12,731	73,76,836	74,50,068	81,55,266

N.B.—Quantities are not available.

Statement showing the imports of Matches into Ceylon from foreign countries during the year 1921-22 to 1926-27.

	1921-22.		1922-23.		1923-24.		1924-25.		1925-26.		1926-27.	
	Gross.	Rs.	Gross.	Rs.	Gross.	Rs.	Gross.	Rs.	Gross.	Rs.	Gross.	Rs.
Matches . . .	126,397	1,98,040	243,011	3,35,714	319,005	3,15,757	360,865	3,29,754	572,370	4,87,439	451,664	3,99,201

(2) Letter No. 8/391, dated the 13th December 1927.

I have the honour to forward herewith statements showing (1) Imports and (2) Re-exports of foreign matches into and from the Bombay Presidency, excluding Sind, from and to foreign countries during November 1927.

Statement showing the quantities and value of matches imported into the Presidency of Bombay, excluding Sind, from foreign countries in the month of November 1927.

	Quantity Gross of boxes.	Value. Rs.
<i>Matches—</i>		
<i>Safety—</i>		
United Kingdom	138	388
Sweden	25,250	23,433
Ceylon	5	8
Czechoslovakia	17,900	17,900
TOTAL	43,293	41,729
<i>Other sorts—</i>		
United Kingdom	28	55
Sweden	8,850	8,439
Norway	16,500	20,632
United States of America via Atlantic Coast	17	20
TOTAL	25,395	29,146

Statement showing the quantities and value of matches of foreign manufacture exported to foreign countries from the Presidency of Bombay excluding Sind in the month of November 1927.

	Quantity Gross of boxes.	Value. Rs.
<i>Matches—</i>		
Bahrein Islands	1,700	3,400
Persia	400	800
Portuguese East Africa	500	1,000
TOTAL	2,600	5,200

COLLECTOR OF CUSTOMS, BOMBAY.

B.—ORAL.

Evidence of Mr. C. R. WATKINS, C.I.E., Collector of Customs, Bombay, and Mr. N. B. VADHAWKAR, Appraiser, recorded at Bombay, on Wednesday, the 14th December, 1927.

Introductory.

President.—Mr. Watkins, you are the Collector of Customs, Bombay.

Mr. Watkins.—Yes.

President.—I take it that you are entirely under the Central Government now?

Mr. Watkins.—Yes.

Seaborne Trade Returns.

President.—In the Customs figures as published in the Seaborne Trade Returns, the value stated is what you call the real value.

Mr. Watkins.—Yes.

President.—That is to say you take the actual market rates prevalent in each port less duty.

Mr. Watkins.—The real value as you probably know for purposes of matches is defined by section 30-A. It is practically speaking the wholesale market value less duty and less trade discount for cash.

Mr. Mathias.—But practically you estimate the value on that basis.

Mr. Watkins.—Yes, in case of matches because there is a wholesale market value. In some cases you cannot say that there is a wholesale market value. Then, you are thrown back on what is practically the c.i.f. price.

Mr. Mathias.—How do you ascertain the wholesale price?

Mr. Watkins.—By making enquiries in the bazar.

Mr. Mathias.—You have records of wholesale prices of matches in Bombay for some years.

Mr. Watkins.—We have records for three years from the bills of entry.

Mr. Mathias.—Do you mean records of wholesale prices less duty and less discount?

Mr. Watkins.—I mean wholesale prices that we have accepted. In the case of matches the matter is not of great importance to us because the duty is not levied on the wholesale value. If it were piecegoods it would be of great importance and then any value you find in the bill of entry I should be prepared to accept as being reasonably accurate because it is the result of argument between my staff and the importer. The importer complains if the value is too high and we complain if the value is too low, so that there is a compromise.

C.i.f. price of imported matches.

Dr. Matthai.—You don't keep a record of the c.i.f. prices, do you?

Mr. Watkins.—No.

Dr. Matthai.—We have often got information from Customs officers about c.i.f. prices of various articles into which we have been enquiring. There is no difficulty.

Mr. Watkins.—In the first place there may not be any wholesale market values for some goods at some ports.

Dr. Matthai.—You give c.i.f. prices of imported matches here. Where did you get these from?

Mr. Watkins.—We made enquiries.

Mr. Mathias.—In the bazar?

Mr. Watkins.—Yes, we continually see documents.

Mr. Mathias.—Could your record of prices less commission and less duty be taken as a reasonably accurate record of prices for the last three years?

Mr. Watkins.—I should think they are reasonably accurate. From the figures given for the values of imports in Bombay, you can take the average. It is quite conceivable that if we were to turn up a dozen bills of entry, we would find that one had been put down at Rs. 2 a gross whereas it ought to be Rs. 2-4-0 or Rs. 1-2-0. In view of the fact that the record is only for statistical purposes, it is just possible that we should let it go instead of sending the man back.

Mr. Mathias.—For all practical purposes if you divide the total value by the total number of gross, you get a reasonable average figure for the year.

Mr. Watkins.—Yes, of the wholesale market value less duty and less commission.

President.—In the case of matches even the fraction of a penny would make a substantial difference in our calculations.

Mr. Watkins.—It would be more than 2½ per cent. in the case of matches.

President.—In the c.i.f. price for instance you have given the Scandinavian matches. We have got some figures from the Swedish Match Company and the average c.i.f. price given by them for all ports is one shilling.

Mr. Watkins.—I cannot argue on that point, being based on their figures.

President.—A difference of 2½ per cent. will make a great deal of difference.

Mr. Watkins.—There are two points. One is I am not an interested person and the other is I cannot say at what price matches are sold at other ports.

President.—It is essential for us to get as accurate a c.i.f. price as possible. You can only get it from invoices. Do you get it from the actual study of invoices?

Mr. Watkins.—Yes, c.i.f. price.

President.—The invoice price you give is probably taken from invoices relating to Swedish matches.

Mr. Watkins.—Probably it is. These figures are the result of recent enquiries.

Dr. Matthai.—You have given us separate figures for imports from Czechoslovakia.

Mr. Vadhawkar.—These are imported by the Swedish Match Company.

Mr. Watkins.—When I got a note saying that you wanted me to give prices the first thing I did was to send a note down to the Assistant Collector in charge of appraising and to set Mr. Vadhawkar to work with a view to preparing some sort of note on the subject and I gave him the various headings such as packings, etc. We saw Mr. Boyd's evidence and tried to get more or less what you wanted.

Mr. Mathias.—This 1s. 2d. for what period is it?

Mr. Vadhawkar.—For the whole year.

Mr. Mathias.—For the whole of which year?

Mr. Watkins.—For 1927— from April onwards.

Mr. Vadhawkar. Even for 1926, the value was the same. This value is concerned only with the Bombay port.

President.—I was referring to the invoice price on page 1 of Mr. Watkins' note.

Mr. Watkins.—That information was collected for me by Mr. Vadhawkar.

President.—That applies to what year?

Mr. Watkins.—It applies to the whole year. This c.i.f. we got from the Swedish Match Company.

President.—We will have to ask the Swedish Match Company about that.

Mr. Vadhawkar.—If they say 1 shilling for all the Indian ports I have got information to the effect that they have got different prices for different ports according to the conditions of the market.

President.—That is a very important information.

Dr. Matthai.—What other ports are you thinking of? In Calcutta, it would be full size mainly. Here it is half size. That might make a difference.

Mr. Vadhawkar.—I think in Rangoon they have got half size.

Dr. Matthai.—I believe only a certain amount. Are you sure that they have different prices for half size matches in different ports?

Mr. Vadhawkar.—That was what they gave me to understand.

Assessment of ad valorem duty.

President.—In calculating the *ad valorem* duty what items do you include besides the c.i.f.?

Mr. Watkins.—In connection with other things besides matches in calculating the *ad valorem* duty we take the total cost of bringing the goods into a godown in the docks in Bombay, landing charges, etc.

President.—Do you include port dues?

Mr. Watkins.—I presume they are included in the freight. Wharfage charges occur very largely after we have done our work of assessing. Actual landing charges are included.

Dr. Matthai.—Do you get an actual figure for landing charges in every case or do you take a standard figure?

Mr. Vadhawkar.—Landing charges are taken as $\frac{3}{4}$ per cent.

President.—On the c.i.f. price?

Mr. Vadhawkar.—Yes.

Mr. Watkins.—That is assessment under section 30 (b) and not wholesale.

President.—Have you been able to ascertain why the importations from Japan have ceased more or less?

Mr. Watkins.—We only get hearsay information in the sense that they have been bought out.

Mr. Vadhawkar.—They cannot compete here.

President.—We should like to know from the Customs people why the imports from Japan have ceased.

Mr. Watkins.—The Customs people are utterly innocent of the reasons. We do not know more than the ordinary gossip as to the reason why a particular man has ceased to import.

President.—The obvious inference is that there would be some cause at work which operates.

Mr. Watkins.—I should refer you to the Swedish Match Company on the subject.

Goods in bond.

Mr. Mathias.—You say that your figures include goods passed into bond and not goods passed out of bond.

Mr. Watkins.—Yes.

Mr. Mathias.—Could you give us any idea of the amount of matches in bond at any one time?

Mr. Watkins.—It is given in the table.

Dr. Matthai.—May I know how long goods are expected to be allowed in bond?

Mr. Watkins.—Three years.

Dr. Matthai.—As a rule matches are in bond for three years?

Mr. Watkins.—They are not likely to be there for three years.

Dr. Matthai.—Could you give me some sort of idea as to what the actual practice is?

Mr. Watkins.—I could take out the figures for you.

President.—In the monsoon for instance, they are not kept at all. They are cleared as soon as they arrive, are they not?

Mr. Watkins.—The match importers prefer somebody else to carry the risk. The duty is high and it means locking up capital. They dispose of the consignment as fast as they possibly can.

Dr. Matthai.—Does transhipment take place from bond?

Mr. Watkins.—That would not be transhipment that would be export from bond. Transhipment may either take place from ship to ship in the harbour or, in practice which is generally the case, matches may be landed on a wharf for a week or ten days and then put on to the outgoing ship. It is transhipment under modern conditions; that is how transhipment is actually done without bonding.

President.—What is the sort of control that Customs keep over transhipment if a ship comes into the harbour and wants to tranship into another ship any goods that it may have on board.

Mr. Watkins.—The merchant has to prepare papers in the case of transhipment. This is very often done by steamer agents. They prepare papers to get permission to tranship so many cases of matches, of whatever has to be transhipped, from such and such a ship to some other ship.

President.—If the ship stands outside the harbour or outside the territorial limit, do you have any right to stop it?

Mr. Watkins.—Not, if it were outside.

President.—How far does your jurisdiction extend?

Mr. Watkins.—Three miles, I think.

President.—So far as you know, have any cases of transhipment happened outside the limit?

Mr. Watkins.—I do not know.

President.—When the ship is in the harbour, is it usual for goods to be transhipped from one ship direct to another ship without being landed?

Mr. Watkins.—I shall try to explain the position. As a general rule there is a short period during which goods are either landed or lying in lighters. Sometimes it is more convenient for the steamer agents to keep their things in the lighters or to land them on the bunder. It is not always possible for two ships to be in the harbour at the same time.

President.—That is true. Is any supervision kept over the lighters by the Customs?

Mr. Watkins.—We are interested in them until we know that they have actually been exported. That is an ordinary precaution that is taken from the point of view of smuggling whether it is matches or anything else. If they are matches, until they are accounted for either by payment of duty or by export, they are under a certain amount of supervision.

President.—They will remain probably in the lighters in the sea or in the harbour.

Mr. Watkins.—They may be alongside; they may be out in the harbour.

President.—Do the Customs officers watch them or what do they do?

Mr. Watkins.—They tally the cases in the lighters out of the importing ship.

President.—When the ship is unloading into any lighter is any Customs officer present?

Mr. Watkins.—Do you mean when they are loading into lighters or when they are exporting from the lighters?

President.—Is any Customs officer present on both the occasions?

Mr. Watkins.—Yes, but not invariably.

President.—I suppose that the shipping company itself will see that no irregularities take place.

Mr. Watkins.—Yes, but we should like the Customs man there to help them.

Dr Matthai.—From your note I gather there are really three ways in which goods landed in Bombay can be shipped free of duty to some neighbouring port. It can be transhipped to say Kathiawar ports.

Mr. Watkins.—Kathiawar ports are now considered as foreign. Goods may be transhipped to those ports.

Dr. Matthai.—They can be exported from bond.

Mr. Watkins.—Yes.

Dr. Matthai.—They can be re-exported, but re-export means that rebate will be allowed on them.

Mr. Watkins.—In that case, they leave $\frac{1}{8}$ th duty with us.

President.—Do you keep separate accounts for re-exports, for transshipments and for goods exported from bond?

Mr. Watkins.—They are kept separately. I think I have given you figures separately.

Dr. Matthai.—The transshipment figures are export figures.

Mr. Watkins.—Yes.

President.—The re-export figures refer to cases on which duty has already been paid and then rebate claimed.

Mr. Watkins.—Re-exports in the first place are merely exports of goods that have paid the import duty. If they are going to foreign ports, they are entitled to a drawback of $\frac{7}{8}$ ths which the merchant naturally claims if he can.

President.—Those are the figures in Table A¹ showing the figures of matches transhipped to Indian States and to foreign ports in British India?

Mr. Watkins.—Yes. Up to a short time ago the Kathiawar ports were customs ports for this purpose and in those cases although the figures are for re-exports they are not figures for drawback.

Dr. Matthai.—Absolutely free, not even $\frac{1}{8}$ th?

Mr. Watkins.—Quite, if imported matches went from Bombay to Kathiawar when the Kathiawar ports were customs ports then there was no financial transaction at all so far as customs were concerned now that the Kathiawar ports have become foreign ports if certain conditions are complied with the exporter can get $\frac{7}{8}$ ths of the duty back. He does not always get it but naturally he arranges in such a way that he manages to get it.

President.—Under what conditions does he not get it?

Mr. Watkins.—If the period of two years has been exceeded since the matches were imported he cannot. There are various conditions attendant on the grant of a drawback.

President.—The period of two years, so far as matches are concerned is a pretty long period, and that would not happen.

Mr. Watkins.—No.

Mr. Mathias.—When exactly did the Kathiawar ports become foreign ports?

Mr. Watkins.—I am not sure of the exact date, but it must be subsequent to 4th July 1927. It is quite recent.

President.—Now, under that arrangement are they not supposed more or less to levy the same duty as British India?

Mr. Watkins.—That is entirely a separate arrangement. It is extremely likely that the Indian States will levy duty at British Indian rates, but that has nothing to do with the Veeramgaon line, but I would rather not say anything on the subject.

President.—I take it that these figures of transshipment include figures relating to matches exported from Bond as well as transshipment?

Mr. Watkins.—No. Transshipment figures only include those figures that have never been cleared in India either for home consumption or for bonding. When goods come into the harbour there are four ways in which they can get out of the harbour—one is that they should not be landed at all: they must go on in the same ship, which you can include. Another way is that they can be transhipped and in transshipment I include temporary landing pending shipment on to the ongoing vessel. The third way is, the duty can be paid and the goods used in British India and the fourth way is that they can be cleared and put in a bonded warehouse. If they are in a bonded warehouse they have got to come out of it either for consumption on payment of the duty or for being shipped.

President.—When they are shipped out of bond?

Mr. Watkins.—That has nothing to do with transshipment.

President.—Where are those figures shown?

Mr. Watkins.—They would come under re-exports.

President.—Re-exports would include duty paid goods?

Mr. Watkins.—Yes.

President.—But shipments from bond would not be duty paid at all?

Mr. Watkins.—No.

President.—Where do the figures for exports from bond come in?

Mr. Watkins.—Exports from bond must be in the figures of re-export; would verify that later and in case it is not so I will let you know.

President.—They must come somewhere either in the one or the other?

Mr. Watkins.—They are certainly not in the transshipment figures.

Mr. Mathias.—Which is the commonest mode of supplying seaboard Indian States—by transshipment or by re-export?

Mr. Watkins.—One way is direct importation. It is impossible for me to tell you anything about that because I have got no figures for direct importation, to Kathiawar for instance.

President.—Is there any arrangement between the British Government and the Indian States and the other foreign territories for the collection of statistics as to the imports?

Mr. Watkins.—I believe the Director General of Commercial Intelligence should be able to give you figures.

President.—Of imports into non-British ports?

Mr. Watkins.—I think so. I am not absolutely certain but I have not got the figures and I therefore think the Director General would be able to give them.

Mr. Mathias.—I suppose there are practically no matches as re-exported after payment of duty in British India to the Indian States, I mean they would not be prepared to pay duty both in British India and in the foreign ports?

Mr. Watkins.—I should not think so. You are talking of the future now.

Mr. Mathias.—I am talking of the past.

Mr. Watkins.—In the past before July the Kathiawar States for instance were customs ports and consequently any matches we show as re-exports before July were duty paid and contained the duty in their price.

Mr. Mathias.—And would be allowed in there free?

Mr. Watkins.—Presumably.

Mr. Mathias.—Unless they were shipped out of bond?

Mr. Watkins.—Yes, but they would not be allowed to be shipped out of bond.

President.—Except on payment of the duty?

Mr. Watkins.—Yes. In those days Kathiawar ports were free ports. Now that the Veerangaon line is on we treat Kathiawar ports as foreign ports and anything that comes through the Kathiawar ports—I mean commercial goods—

gets caught presumably at Veeramgaon and the Customs duty is collected at the frontier.

President.—What are the arrangements at present between the British Government and Kathiawar or any other foreign ports as far as customs are concerned? Are all goods coming into Bombay liable to the British duty?

Mr. Watkins.—From where?

President.—From Kathiawar.

Mr. Watkins.—Yes, but there are certain exceptions, for instance the produce of Kathiawar.

President.—Is that agricultural produce or does it also include manufacture?

Mr. Watkins.—It includes manufacture.

President.—That brings us on to an important point. If it were to be the case that anything manufactured in Kathiawar were to be allowed to be imported into British India free, then logically the British Government might lose all its revenue from matches if matches were to be manufactured in Kathiawar.

Mr. Watkins.—That would follow, I think.

Mr. Mathias.—Is that part of the treaty arrangements?

Mr. Watkins.—I am not competent to give evidence on that point.

President.—You can give evidence as to the actual practice. What would you do?

Mr. Watkins.—That is not a question of treaty or anything of the sort. That is a matter of notification which is a matter of common knowledge. The produce of Kathiawar is passed free on importation into British India.

President.—Can you refer us to the notification?

Mr. Watkins.—I cannot off hand.

President.—Later on.

Mr. Watkins.—Easily.

President.—We would like to see that because it raises a very important issue from our point of view.

Dr. Matthui.—What is the source of information for a layman about these treaty arrangements? They are matters of common knowledge; there is nothing confidential, is there?

Mr. Watkins.—I do not know of any source of information on this particular point.

President.—Except secret treaties I think they are all contained in the Aitcheson's Treaties?

Mr. Watkins.—The 1917 agreement was not a treaty at all.

President.—At present so far as Bombay is concerned, are any manufactures imported from the Kathiawar States into Bombay?

Mr. Watkins.—Cement I think comes from Kathiawar—the Porbunder cement.

Import of excisable articles.

Mr. Mathias.—For instance liquor which is an excisable article, can that be imported free?

Mr. Watkins.—Excisable articles are excluded in the notification. It can be made to include matches if you want.

President.—Even assuming that the Kathiawar States or any other Indian States are entitled to claim that their manufactures should enter British India free of Customs duty, is there anything to prevent the British Indian Government from insisting that the excise duty shall be paid, or we will put it to you this way—can they claim a more favourable treatment?

Mr. Watkins.—Would it not be more satisfactory to obtain this information from Simla? I am only a Customs official. They can give you all the information.

President.—I dare say you are supposed to administer this part of the Government policy.

Mr. Watkins.—I am supposed to carry out Government orders.

President.—I want to understand exactly what the orders are.

Mr. Watkins.—On what points?

President.—Supposing an article that is excisable in British India is imported from Kathiawar ports into British India through the Customs what would you do? Take salt, opium, liquor or any other thing which is excisable. Supposing that article is imported?

Mr. Watkins.—The existing excisable articles are restricted from the exemptions of free importation.

President.—Is there a notification about that?

Mr. Watkins.—I think that it is the same notification under which ordinary Kathiawar produce is passed free. I think it says except liquor, salt, etc.

Mr. Mathias.—Under what Act is that?

Mr. Watkins.—The Sea Customs Act.

Mr. Mathias.—There is nothing in the Act to prevent the extension of the notification to any other article?

Mr. Watkins.—No. Government have power to exempt from duty anything they like: not necessarily excisable, but anything that Government sees fit to exempt.

President.—That notification is issued. I take it, under the general powers of the Government of India.

Mr. Watkins.—Yes.

President.—Is it a recent or old notification?

Mr. Watkins.—It must be recent, since July 1927.

Dr. Matthai.—You have no control over the Karachi port?

Mr. Watkins.—Absolutely none. Karachi is under the Central Board of Revenue.

President.—Is Sind for customs purposes treated as a separate unit?

Mr. Watkins.—Entirely. Karachi is one of the five chief ports and has a Collector.

Use of revenue labels.

President.—As regards the manner in which the Government can safeguard its revenue, one of the proposals we were considering was the affixing of revenue labels to match boxes. One of the objects we should have in view from the Government of India's point of view is that its revenue should be protected in the event of Government desiring that certain revenue shall be derived from matches. At present there is only the Customs duty. If the Government of India thinks that it is desirable in the public interest that an excise duty should be levied, it may be levied. In that case we have got to devise some means by which the revenue might be safeguarded and for that reason we ask your opinion from the administrative point of view whether there are any serious objections to the use of labels?

Mr. Watkins.—As I told you the other day, so long as I don't have to accept labels instead of my revenue, I am quite prepared to carry out the orders, but I should be very reluctant still to have to pass matches bearing a certain label and to assume that my revenue has been paid.

President.—There are two ways in which labels can be affixed, one in the country of origin and another in bond under the supervision of the Customs authorities—it is a very simple process indeed, there is nothing in it. We will take the two things separately. The second proposal is the one that has been put forward by the manufacturers since we saw you last. As regards the first, there are only three countries from which matches are being imported into India now.

Mr. Watkins.—Yes, Sweden, Czechoslovakia and Austria.

President.—Take the Swedish Match Company. Most of the imports come from Sweden so far as India is concerned. Supposing Government felt that the Swedish Match Company will not defraud Government by not labelling boxes, would you still have any serious objection?

Mr. Watkins.—If you are making that assumption then I have no objection. I am simply here to carry out Government orders. But I think in practice it would be most undesirable that we should be asked to assume that if every box was labelled our duty had been paid. We will have to open very many more cases.

President.—At present you open 5 per cent.?

Mr. Watkins.—Yes. We shall have to open more than 5 per cent. or we shall have to see the vouchers.

President.—Supposing no matches are allowed to be imported without license the firm itself must be licensed. Government will take care that that firm can be depended upon. If Government felt that that the firm could not be depended upon, then they will say "you must put on the labels in the presence of our Customs officers".

Mr. Watkins.—It is tantamount to refusing a license.

President.—Yes, if Government is satisfied that it is being defrauded.

Mr. Watkins.—I still cannot see the necessity for giving them from that point of view a fiscal value. You can devise a label for imported goods and still let me collect the duty independently.

President.—Supposing we gave these to the Indian States in the case of Indian States the Government of India wished to be satisfied that every match that comes from the Indian States into British India pays the duty.

Mr. Watkins.—Is Government going to put itself in this position "We trust X as an importer, we don't trust Y who is a manufacturer"?

President.—Those are purely foreign matches and therefore we don't want to make any distinction. We say "all matches should be labelled", whether from Sweden or from Czecho-slovakia, or the Indian States. Before they enter a British Indian port, they must have these labels.

Mr. Watkins.—In that case you are going to put a petty dealer anywhere in our frontier in an awful position, or else you are going to compel the Indian States to levy the same duty as the Government of India.

President.—We are not so much concerned with the excise as regards their own consumption, what we are concerned with is this. Supposing all the Bombay factories are taken into the Indian States then it becomes necessary for the British Government to protect itself both against importation from the Indian States as well as from abroad and Government, as you say, cannot make a distinction between the foreign manufacturer and the manufacturer in any of the Indian States. Therefore Government may pass the same law for the two and say "You can manufacture as many matches as you like, but if you want to send them into British India, you will have to pay the duty".

Mr. Watkins.—But the trouble is this. In the case of Sweden, for the sake of argument, if they make 1,000 cases of matches they know that they are going to, say, India or to America. If they are going to America there is no risk of their coming across the frontier into India. In the case of the Indian States if they don't want to tax the matches consumed in the States themselves and at the same time they are unable to prevent them from coming across the frontier to villages in British India, what are they to do. Matches that were actually issued by the manufacturer in the belief or the alleged belief that they were going to be consumed in the States themselves but which in fact were subsequently taken across the frontier will not be stamped.

President.—The British Government can say "you can do what you like in your own States, you can't tamper with our territory".

Mr. Mathias.—Would it not work this way: supposing we said anybody using matches in British India without labels should be prosecuted, that would soon stop the sale of illicit matches, would it not?

Mr. Watkins.—It would be very difficult.

President.—Supposing both the buyer and the seller are liable to prosecution, a few prosecutions would soon put an end to that.

Mr. Watkins.—If the seller is in an Indian State you cannot make him liable to prosecution.

President.—There must be a buyer and seller in the British territory.

Mr. Watkins.—I don't think that the two cases are analogous in any way. I don't think they can be urged as a reason for making us accept the face value of a stamp as import duty. What I am getting at is this. In the case of a continental manufacturer he knows whether the goods are going to India or not. Whereas in the case of a manufacturer in an Indian State he does not know whether the matches are going to British India or not.

President.—It is not the concern of the manufacturer. It is the concern of the State. What I am suggesting is that if the British Government wants to protect its revenue it must see that every match box that comes into the country pays the duty that it intends to levy.

Mr. Watkins.—Yes.

President.—As regards regular importations from abroad through the ports you may levy the duty as you are doing.

Mr. Watkins.—Yes.

President.—As regards importations from the States you cannot do it.

Mr. Watkins.—We can still do it. There is a Customs cordon so far as the Maritime States are concerned.

President.—But then you have got other Indian States. Take Hyderabad or Rajputana. They can have factories there. That at once raises the question of a very big land customs barrier.

Mr. Watkins.—My point still is that the factory in a State does not take the stamp for importation as having a fiscal value.

President.—Why not?

Mr. Watkins.—You can still have one stamp for goods manufactured in India if you have your excise duty and still leave the Customs duty to be collected in the ordinary way.

President.—How would that save you any trouble? You have got to see that no match box enters the country unless it bears a label whether the label has a value or not.

Mr. Watkins.—I am quite prepared to see as far as maritime ports are concerned.

President.—It is immaterial to you whether the label is a revenue label or not. You have got to see whether each box bears a label.

Mr. Watkins.—You want a far closer inspection to make sure that you have got every pie, if the tickets have a revenue value than if it had merely a preventive value.

President.—Those same labels can be put on to goods going to Kathiawar and then sold in British India.

Mr. Watkins.—If they go into Kathiawar they have to come out of Kathiawar. If they come out of Kathiawar they can still be made dutiable.

President.—They will say that these boxes were cleared through the Bombay Customs and that they were duty paid. How can you prevent them from saying that? How can you collect the duty twice over?

Mr. Watkins.—I would say 'don't let the existence of labels imply that the goods are duty paid'.

President.—It means that even if they come from Kathiawar ports you have got to collect the duty.

Mr. Watkins.—Yes.

President.—As regards the maritime States you can do that. But as regards Rajputana, Mysore, and Hyderabad, how are you going to have a cordon?

Mr. Watkins.—Cover them, if you get their matches in British India, with your excise labels.

President.—Supposing an excise is levied the import values would be an addition and the value would be higher. You have got to have different values.

Mr. Watkins.—My solution would be that so far as any matches coming from overseas are concerned they should have some label or labels approved by the Government of India, you may say a label bearing the name and address of the manufacturer, and the Government of India can prohibit the importation by land or by sea of matches that are not labelled with the name and address. You would then only fear matches that are manufactured in Mysore or Hyderabad or in some State in the interior.

Mr. Mathias.—Or matches manufactured in India on which forged labels are pasted?

Mr. Watkins.—As I said in my note to hark back to that case, you have got to have somebody forging labels or importing them. If the man forges them in India, you can ultimately get hold of him and punish him, or if he imports them he can be got at and punished.

Mr. Mathias.—How?

Mr. Watkins.—The importer can be got at. Obviously there must be some criminal act under which that can be done.

Mr. Mathias.—Suppose I had a small factory in a State and suppose I had a factory in India. I was able to get these labels free from Government without payment of the excise duty for my imported matches. I manufacture these labels and export them to my factory in India.

Mr. Watkins.—To begin with I would not suggest that labels should be issued by Government.

Mr. Mathias.—I import my labels and put them on matches made in my factory in India.

Mr. Watkins.—If Government supplies the labels.....

Mr. Mathias.—There would be no criminal offence in importing labels. It would be very difficult to prove the intention.

President.—There are countries in which these labels are used. They don't present any serious difficulty. In many countries in the world you have them. In England also you have got them on chemicals, on soda water bottles and thousand and one other things, but they don't present any serious administrative difficulty.

Mr. Watkins.—A packet of matches costs six annas; that means 12 labels.

President.—What about that?

Mr. Watkins.—The value is half an anna as compared with patent medicine worth a shilling.

President.—The value of the label on it may be half an anna or a shilling. Why should the Indian Customs authorities find it difficult to administer system which is common in other countries.

Mr. Watkins.—I cannot believe this. So far as imports into other countries are concerned I don't for a moment feel inclined to believe that there is any Customs Administration which will allow the import of cases of matches with labels on each box representing so much cash received.

Dr. Matthai.—In the United Kingdom where labels are used on imported things, they don't generally have a fiscal value. What apparently happens is that the duty is collected on the imports as Customs duty is collected now and before they are passed on they apparently put on the labels as evidence of payment.

Mr. Mathias.—Would there be any difficulty from your point of view in your seeing to the manufacturers affixing their labels in bond?

Mr. Watkins.—No, it would be merely a question of expense to have an officer. We have now an officer seeing the bottling of whisky.

Mr. Mathias.—Take the Swedish Match Company. They put an extra shed at Ambarnath for unpacking their boxes and affixing these labels and in that case you will have to have a customs officer there to see that their boxes are properly labelled before issue.

Mr. Watkins.—Provided we let them do it in an inland bonded warehouse.

Mr. Mathias.—Otherwise where would they do it?

Mr. Watkins.—They would have to do it in a private bonded warehouse in Bombay.

Mr. Mathias.—Would there be any difficulty in having one of your officers there?

Mr. Watkins.—No, but it would mean extra expense because it involves unpacking and re-packing.

Mr. Mathias.—The imposition of excise would mean extra expense to the local industries and extra capital?

Mr. Watkins.—You still have that extra expense in some cases. I still see no reason why matches imported from overseas need have any label prescribed by the Government of India for the purpose of check in British India. We have the machinery and we can recover the import duty regardless of the labels and then you can have, if you like to, a separate label for excise purposes. That can be made to apply to goods manufactured in India, and there your safeguard would be that you can come down on the petty dealer and consumer for using matches which have not got labels.

Mr. Mathias.—Would you see any objection from the Customs point of view if a system was devised on these lines? Supposing you had an excise duty on matches manufactured in the country of 12 annas and an additional import duty on imported matches of 10 annas, that is a difference of 2 annas, that difference would cover the expenses of unpacking, stamping and repacking of imported matches. You then insist that all matches should bear a special fiscal label purchased from Government and remain in bond until that label is affixed under the supervision of the Customs. Do you see any insuperable difficulty in that?

Mr. Watkins.—If you can prescribe by law that the customs will have to recover 10 annas per gross then I see no objection to your also directing the Customs to see that imported matches were not imported unless they bore a 12 anna label, but leave us with the responsibility of collecting not Rs. 1-8-0 a gross but 10 annas a gross and the responsibility of seeing that all matches coming in across the customs frontier whether through a port or by railway, should be stamped. That would meet your requirements and my views. I feel if I am responsible for collecting Rs. 1-8-0 or 10 annas a gross—it is not important what it is—I want to see the cash before I part with the goods—cash as opposed to labels.

Mr. Mathias.—That could be met by a system of affixing labels in bond : as soon as they affixed the labels they paid the duty.

Mr. Watkins.—If you give them the option then your first class manufacturer would buy his stock of 12 anna excise labels and affix them as part of his system of manufacture. He would probably manufacture in India to save unpacking; handling, repacking and so on in bond. The bond system could be an alternative system.

Mr. Mathias.—Supposing we had only one system?

Mr. Watkins.—If you had only one system I think you are either foregoing a certain amount of revenue that you could otherwise have or you are raising the price of matches to the consumer because all the handling will have to be done at the cost of the consumer or Government.

Mr. Mathias.—In other countries there is very often a difference between the excise duty and the import duty—as in Great Britain—calculated on the additional expenditure involved to home manufacturers.

Mr. Watkins.—In that particular case it means that Government is foregoing some of its revenue.

Mr. Mathias.—It does, but have you any objection on principle?

Mr. Watkins.—I have no objection to accept the principle. But if you compel people to do their labelling in bond you put up the price of matches and you put the people or Government to expense which is unnecessary.

Dr. Matthai.—Your suggestion comes to this, that the revenue is collected as at present and as soon as it has been collected those people have got to paste the labels here in bond, the labels simply marking the fact that duty has been paid. Is that your point?

Mr. Watkins.—No.

Dr. Matthai.—Where is the labelling to be done under your system?

Mr. Watkins.—What I was contemplating there was that the customs duty should be fixed at 10 annas—by way of illustration—and that there should be some further charge—call it excise duty—on consumption before offering for sale, of 12 annas, the label signifying that the extra 12 annas has been paid. The label can either be put on in bond, in Indian factories or in factories abroad.

President.—Why should you want to throw the burden of seeing labels on the excise authorities—a responsibility which you are not prepared to take?

Mr. Watkins.—I am prepared to take the responsibility. If you don't give us the option, I would certainly see that labels are affixed to all matches that may be imported over the Customs frontier. There is no Customs frontier round Mysore or Hyderabad or any other States in the interior. As long as you make me responsible for the Customs duty as Collector of Customs, I should like to have cash and not tickets issued by other people.

Mr. Mathias.—But tickets will be issued under your supervision or issued by yourself.

Mr. Watkins.—I don't like that.

Mr. Mathias.—If the importer imported 1,000 cases and you collected the full Customs duty of Rs. 1-8-0 per gross plus the additional ten annas and then passed them into bond where labels were affixed under the supervision of one of your men?

Mr. Watkins.—I should not like to collect the duty until the goods came out of bond.

Dr. Matthai.—In that case, the affixing of the label is to the interest of the trader. You are not concerned any more with labels. Whether they affix their labels or not, you have got your revenue.

Mr. Watkins.—I am prepared to accept that responsibility.

Dr. Matthai.—Why should you accept the responsibility?

Mr. Watkins.—If the Government of India tell me to do it.

Dr. Matthai.—What I don't understand is why should the Government of India tell you to do that? I pay the Customs duty to you in the ordinary way. I don't want to be asked to pay an extra excise duty. When goods come here it is to my interest to see that the labels are affixed. It is not to the interest of Government. Why should there be any Government supervision?

Mr. Watkins.—So far as you are concerned as a trader you would very much prefer to be able to sell. Supposing the label was worth 8 annas it might pay you to sell at 4 annas less and take the risk of not having a label. From a purely Customs point of view I would ask that I should be allowed to collect the duty in cash.

President.—If Government throws on you the duty of seeing that they bear the labels, how is your work diminished? The actual collection of the duty is of less importance than the fact that every box bears a label. If you are prepared to take upon yourself the duty of seeing that every box has a label though it has got no fiscal value, I don't see why you should object to see that it bears a label which has a fiscal value.

Risk of forgery.

Mr. Watkins.—A label is an extraordinarily easy thing to forge: it must be easy to forge unless it is too expensive. Cash we can recognize. We are willing to take our risk of accepting occasionally a forged 10-rupee note; but there we at least feel certain that we have got hard cash.

President.—The postal authorities may say the same thing?

Mr. Watkins.—I don't think so because it is not worth while for the casual writer of letters to forge a stamp.

President.—But it may be worth somebody's while to forge stamps in order to sell to the vendor?

Mr. Watkins.—He has either got to forge stamps wholesale in India when you can catch him or else he has got to import stamps in sheets when you can catch the importer.

President.—Here also some manufacturer has got to deal in forged stamps. Nobody can make use of the labels except the manufacturer of matches.

Mr. Watkins.—Supposing I find for the sake of argument 1,000 cases of Japanese matches all with forged stamps on.

President.—Somebody here imports them.

Mr. Watkins.—You cannot make the man here responsible for that; you cannot catch him because he says I do not know, they must have been forging in Japan.

President.—The importer must clear the goods from the Customs. At that stage he becomes responsible.

Mr. Watkins.—He does not.

President.—The law will make him responsible; the law must make him responsible.

Mr. Watkins.—You cannot make a man responsible for forgery committed by somebody outside India.

President.—Those goods are confiscated in India because they bear no labels. Somebody must send them from there. You simply say any goods coming into the country without labels you will confiscate. The importer says I do not know, then you confiscate the goods. I don't see at all that there is any risk of forgery.

Mr. Watkins.—I am afraid I do.

President.—It is well known that there is no importation except from those three different places that we have mentioned and it is also obvious more or less that so far as India is concerned the importation is from Scandinavia: all the other matches are not imported into India; they go to other outlying ports. So that there is only one source from which matches come into the country.

Mr. Watkins.—Don't you think it possible, if labels can be forged—and it must be admitted that they can be forged—that countries now out of business could with that Rs. 1-8-0 preference due to forged labels come into business again?

President.—As far as one can see the Swedish Match Company will see that they don't. There must be a reasonable guarantee for the Customs to see that these matches will bear labels. Then the Customs authorities can satisfy themselves by opening any number of boxes and seeing that these boxes do have labels. Government may prescribe that no matches shall be imported into the country except by people who are licensed to import, who will be held responsible for any matches coming into the country with forged labels or without bearing any labels. With all these safeguards why should the Customs authorities feel that the law will not be properly administered?

Mr. Watkins.—There is nothing that speaks so clearly and strongly as money, so far as Customs is concerned.

President.—We have got to apply this to the Indian States, maritime as well as inland, where it is very difficult to take money.

Mr. Watkins.—The maritime States are on all fours with Bombay and Calcutta and Indian States can be placed on all fours with the British Indian factories.

Mr. Mathias.—How?

Mr. Watkins.—By letting them have an Indian stamp and prohibiting sale in British India of any match without that stamp on it. You can provide for that stamp being purchased in British India and a man near the frontier can buy them at the post office and must be made liable to put them on.

Mr. Mathias.—Would not that be differentiating between a manufacturer in an Indian State and a manufacturer in Sweden? Why should you make an invidious distinction?

Mr. Watkins.—I don't see why you should not do that because they have some justification to expect better treatment.

President.—It would be worse, would it not?

Mr. Watkins.—No.

Mr. Mathias.—It would be worse to allow foreign importers to manufacture their own labels and import matches with labels on?

Mr. Watkins.—You also give me the option of not putting the labels on these things.

Mr. Mathias.—You mean to say that you insist that the excise label should be attached to the match manufactured in an Indian State before it comes across?

Mr. Watkins.—Yes. You leave it to the Indian States to see how they are going to cope with that.

Import from Indian States.

President.—Supposing we put it this way, the Customs duty is Rs. 1-8-0 and the excise duty 12 annas. Take the maritime ports of Kathiawar. They say "All right, the excise duty in British India is 12 annas. We shall import foreign matches into Kathiawar ports, put on excise labels and take the difference". How are you going to differentiate between imported matches which are sold here paying Rs. 1-8-0 and the foreign matches paying only 12 annas.

Mr. Watkins.—Rs. 1-8-0 includes the 12 annas.

President.—Rs. 1-8-0 may be in addition to 12 annas.

Mr. Watkins.—In that case as soon as matches come to the Veerangaon line—taking that particular maritime State—you would charge them Rs. 1-8-0 per gross and there would still be in force the prohibition against the sale in British India of matches that have not got the 12-anna excise label on too.

Mr. Mathias.—Supposing I am a merchant in a maritime State and I arrange with a manufacturer in England to export matches without any labels at all. When they get into the maritime State I put the 12-anna excise label on it and then export?

Mr. Watkins.—Then, I shall charge him Rs. 1-8-0 when he exports them. We would be perfectly entitled to tell these maritime States that hitherto you have not been manufacturing matches and we do not propose to treat matches manufactured in the States in the future on the same lines as other produce of the States.

Mr. Mathias.—It is rather interfering with the starting of a new industry in the Indian States, is it not?

Mr. Watkins.—That may be.

Mr. Mathias.—I am not clear as to what your scheme is. I understand that what you propose is that if we impose 12 annas excise duty in India and we add on to the present import duty another 12 annas which would make it Rs. 2-4-0 the duty should be levied in the same manner as the duty is levied at present by the Customs authorities but that the foreign manufacturer should attach to their boxes a label containing the name of their match, the name of

the manufacturer and that in itself would be a guarantee that the matches have paid the Customs duty.

Mr. Watkins.—No.

Mr. Mathias.—But in the case of the inland Indian States they should be compelled to purchase the excise labels in British India and affix them to the boxes they import.

Mr. Watkins.—I don't like the proposal. Assuming that you want to collect Rs. 2-4-0 in India, then I say let 12 annas of it be the excise and Rs. 1-8-0 duty.

Mr. Mathias.—Can you impose an excise duty on imported matches?

Mr. Watkins.—I would not call it excise because excise presupposes generally that it is something indigenous.

Dr. Matthai.—Have a countervailing duty?

Mr. Watkins.—Have a tax on the sale of matches and provide by law that no matches should be sold in British India unless that tax has been paid and also provide for labels showing that the tax has been paid.

President.—That implies that the foreign manufacturer or the importer here has got to put on the labels in this country.

Mr. Watkins.—No. Provide for all matches to have certain labels before they are sold or bought. Tell the Customs that they are to collect the Customs duty, they have nothing to do with this match tax. Customs collects the Customs duty whether the matches are imported by land or by sea: the Customs will also see that no goods are released into the country for consumption unless they bear the match tax ticket: those who manufacture and prefer to make arrangement with the Government of India to get stocks of match tax tickets, would fix them in Sweden or anywhere else on consignments to be imported and in the course of our customs examination we should see that these have been affixed. Those manufacturers who do not find it convenient to get their match tax tickets ahead would put their matches in bond and keep them there until they were prepared to label them and the Customs as being in charge of the bonded warehouse would see that the matches are not let out of the bonded warehouse until these tickets are put on them.

President.—I do not see how your position is improved by having to see the 12-anna label put on instead of the Rs. 2-4-0 label.

Mr. Watkins.—Because I am primarily a Customs officer and am responsible for the Customs duty.

President.—You say you would have that, but you would see that Rs. 1-8-0 was paid to you and then after that you are not prepared to see that Government also gets 12 annas payment on account of labels.

Mr. Watkins.—I say that I would see that labels are put on and it would rest then with the Government agency dealing with matches upcountry to find out when forged labels are used and to see that matches coming from inland States have labels and so on. That makes a very great difference. My primary duty is to collect the Customs duty.

President.—Instead of saying that it is Rs. 1-8-0 customs duty and 12 annas excise duty so far as foreign matches are concerned, supposing Government says "we will call it Rs. 2-4-0 Customs duty"?

Mr. Watkins.—If they do that I should collect Rs. 2-4-0 in cash.

President.—If you are prepared to see that matches bear these labels in addition to collecting the customs revenue, I don't see how it saves any labour so far as your department is concerned?

Mr. Mathias.—Supposing you collected Rs. 2-4-0 in cash and simply had the additional duty imposed on you to see that labels are fixed, is that less laborious?

Mr. Watkins.—Personally from a purely customs point of view I would deprecate labels altogether.

Mr. Mathias.—Would it not be a simpler method for you to collect in cash Rs. 2-4-0 than to accept responsibility for seeing that no matches are imported without labels, while on the other hand an excise regulation would be

passed that no boxes of matches should be imported from the Indian States into British India without British Indian excise labels being fixed?

Mr. Watkins.—I have got no objection to that.

Mr. Mathias.—Wouldn't that be a simpler method?

Mr. Watkins.—But then you would have a different label for the imported match and the excise match. I thought you wanted to have the same label or labels must not have any fiscal value.

President.—The labels must be different because they would have different values—for the Customs Rs. 2-4-0, for excise say 12 annas. (But labels will have to be different.)

Mr. Watkins.—As I said, the Government of India can prescribe any label they like so long as they do not attach any fiscal value to them, but I don't want to be driven back to the position of having to accept any labelled box as representing so much cash paid to Government. I don't think it is safe.

Dr. Matthai.—Why do you say, 'not safe'? The point as I understand it is that unless you made very minute examination of a consignment you would not be sure that the duty has been paid. That is the real point, is it not?

Mr. Watkins.—The real point to my mind is that that these paper labels can be forged. Supposing you make it Rs. 3, it is certainly going to pay somebody to set up a factory in Arabia for instance—I don't want to mention any particular country and forge those tickets and import their matches. That gives them a preference of Rs. 1-8-0 or Rs. 3 or whatever price you may put your label at.

Dr. Matthai.—And therefore your point is, to the extent the amount of revenue that is collected by means of tickets is reduced, to that extent the risk of forging becomes less?

Detection of forged labels.

Mr. Watkins.—My personal view is that tickets will have to be forged wholesale. If they are forged in this country you can catch the man and give him seven years' imprisonment or whatever you think necessary. If they are forged in another country they have got to be imported and if it is not already a penal offence it could be made a penal offence, and you would be able to detect the importation of sheets and sheets of stamps than you are able to detect a forgery if you have got cases of matches with forged labels coming in. Take a country of low commercial reputation. Tickets will not be difficult to forge. In fact they would be extraordinarily easy to forge and it is going to be quite a long time before you discover thousands of cases coming in bearing forged labels.

President.—Would you know the country of origin ordinarily?

Mr. Watkins.—Not necessarily but we should know the last port of shipment.

President.—You know this port of shipment. You say matches have never come from this port before, they are beginning to come now and you find out where they are getting the labels from. The authority that sells labels is the Government of India and you can easily find out whether the Government of India has sold labels to anybody else other than the importers.

Mr. Watkins.—That is not part of the Customs officer's job; that is C.I.D.

President.—Why C. I. D.? You know where the matches come from. Supposing we begin to find that matches are coming from, say, Timbuctoo. Well, Timbuctoo never had a match factory before and we at once become suspicious as to where these fellows are getting the stamps from.

Mr. Watkins.—In the meanwhile hundreds of cases have already come through.

President.—The moment matches come from a port which is quite unfamiliar to you, you will stop that and make enquiries.

Mr. Watkins.—Suppose they come from London.

President.—They must come from somebody who has bought the stamps.

Mr. Watkins.—London is one of the biggest ports in the world. We get French brandy and other things coming from London—all consigned from London and shipped from London.

President.—If a shipment comes from London, you are entitled to find out who the shipper is. You find out from the Government of India whether that shipper has purchased these stamps or not. You can start an enquiry and find it out.

Mr. Watkins.—My original objection to labels for revenue was that it was going to involve an undue amount of correspondence and enquiry and I still think that there is nothing like cash for a Customs man.

Dr. Matthai.—May I ask for some explanation? Supposing the provision was that the whole of Rs. 2-4-0 was to be collected by tickets but all the tickets were to be pasted in India after the thing had been landed. Then you see if there is going to be forgery, it is done either on a wholesale scale in India or it is imported on a large scale from abroad and therefore according to your own admission the problem of detection would be easy.

Mr. Watkins.—That could be done. It is merely going either to raise the cost of matches to the consumer or to reduce the Government revenue.

Dr. Matthai.—Apart from what it costs Government or the consumer, look at the point of view of detection. If the provision was that all the pasting of labels was to be done in India, then the task of detection would be much simpler.

Mr. Watkins.—Yes.

President.—Supposing as I said Government allowed nobody to import except under a licence and the importer was held responsible, then you know exactly who is responsible for the forgery and it would therefore be much simpler.

Mr. Watkins.—I think that you will find it extremely difficult to make the importer responsible for a forgery.

President.—He loses his goods.

Mr. Watkins.—The loss of goods is not sufficient punishment.

President.—It costs a good deal to the man.

Mr. Watkins.—Time after time we find that mere confiscation of goods is not a sufficiently deterrent punishment. As far as gold thread for instance is concerned, if they lose only one consignment in four, they gain.

President.—You would not allow any consignment to come in.

Mr. Watkins.—I maintain that it is impossible immediately to detect forgeries of those tickets on matches. There are, without mentioning any particular country, some countries with a lower sense of commercial morality than others and we find goods actually bearing labels 'Made in Sweden' which have never been west of Suez. I am prepared to state that they are deliberately putting labels 'made in Sweden' for some reason or other.

Mr. Mathias.—They might start a new town to do that.

President.—The difficulty of forgery would apply to any labels, whether for excise or for Customs, would it not?

Mr. Watkins. The Customs duty is Rs. 1-8-0. We can at least secure that.

President.—In course of time, the excise duty may be higher than the Customs duty; in that case the temptation to forge excise labels would be greater.

Mr. Watkins.—But your labels would have to be forged in this country or imported wholesale.

President.—Supposing protection is given to this industry, it is the excise label which would become of far greater importance.

Mr. Watkins.—You are able to control that. You cannot detect a forgery committed in any other country. The most that you can do is to confiscate the goods and you can't make a respectable merchant in Bombay responsible

for forgery that has been committed in Timbuctoo, because he buys goods guaranteed to bear the Government of India stamps possibly even *visaed* by the British Consul in Timbuctoo.

President.—What about the land frontier where there is no customs?

Mr. Watkins.—I do not control the land customs. In the North-West Frontier also there is no customs barrier.

President.—As far as I can see if we are to adopt your scheme it really comes to this that the Customs duty would be levied in the ordinary way. As regards the excise duty even admitting that forgery of stamps can be very easily detected, there is still a risk and therefore what we are left with is a sort of Customs land barrier between the British territory and the non-British territory. Then the Government of India must be prepared to lose its revenue.

Mr. Watkins.—Yes, to the extent to which tickets can be forged in the country: I think that it is a far greater risk.

President.—The same risk is there. I really can't see that there is any greater risk. Labels may be forged, but matches bearing these forged labels cannot be passed through the Customs any more successfully than matches bearing forged excise labels. It may be that you are right. One may forge Customs labels but to say that the Customs authorities cannot deal with forgeries is rather hard to believe.

Mr. Watkins.—My point is that we have got at least Rs. 1-8-0. We will get nothing under your scheme in the case of a forgery.

President.—Provided he not only forges the labels but also gets the article through the Customs. A mere forgery won't help him. There is no purchaser abroad for matches bearing those forged labels.

Mr. Watkins.—We will endeavour to hold up for the purpose of match box tax anything that has a forged label on, if we find a forged label. But we would like to have our Rs. 1-8-0 in cash.

President.—What it means is this that the Customs authorities don't think that they can administer a system which requires that it should be satisfied that the labels were not forged.

Mr. Watkins.—I don't say that. I say that the Customs ought not to be asked to do that.

President.—That of course is a different point. What I want to know is—would it be beyond the Customs authorities to take reasonable care to see that articles bearing forged labels do not enter the country?

Mr. Watkins.—It depends entirely on your definition of 'reasonable care'. If I have got to write to London to find out who has received the issues of stamps, then I say I am not prepared to do it, unless I am instructed to do it.

President.—Take the case of steel. Just now they have got to satisfy themselves as to the country of origin and they are doing it. There is no great difficulty. In the same way supposing you suspect that some matches are being imported with forged labels, it is incumbent upon you to make enquiries.

Mr. Watkins.—It is certainly incumbent upon us to make enquiries in connection with steel and we do so. In the case of steel certificates signed by certain people have been prescribed. If you like you can prescribe the same thing for matches.

President.—If Government prescribes that before he is able to clear anything he should make a declaration as to where he got his matches from and so on, would not that be useful? In that case, the point is that you must fix the responsibility on somebody in India. That is your real point.

Mr. Watkins.—Yes.

President.—Supposing Government take the precaution to see that matches cannot come into this country until somebody in India is responsible, from the Customs point of view, will that meet your objection?

Mr. Watkins.—I don't think you can make anybody responsible. We are continually dealing with such cases as fountain pens with nibs marked 14 carat

gold. It is quite possible that the man who imports believes that he is buying 14 carat gold but in point of fact it is not gold at all. And the only thing we can do is to confiscate the goods and yet they are continually coming in.

President.—Obviously the law is defective from your point of view?

Mr. Watkins.—It is, but I can suggest no way in which it can be put all right because you cannot penalise a man in India for an offence committed in Germany, Austria or anywhere else.

Dr. Matthai.—On page 3 of your note speaking of Czecho-slovakian matches you say that they are not marketed in Bombay but are sold to customers up the Gulf. What Gulf do you mean?

Mr. Watkins.—The Persian Gulf.

President.—You say "Stamps affixed on imported matches are not likely to be of any real use to prevent smuggling unless the law is amended and unless steps are taken to give the stamp a monetary value for payment of duty (in which case much care to detect forgeries will become essential)". Can you give us some idea as to the direction in which the law requires amendment from the administrative point of view?

Mr. Watkins.—I think that you will have to provide for its being possible for Government to prescribe that certain goods have to be in some way identified as having paid the duty and make it an offence to sell goods which are not so identified. I don't say labels because labels might be torn off. I think that it is extremely likely that the Government of India will find that they cannot get over the difficulty. It is going to be difficult to devise any means. The long and short of it is that you are going to put the onus of proof on the man instead of the Customs Department. If that is done it is going to be of great assistance to prevent the smuggling of matches. As I said in my note at the present moment similar steps are under contemplation in connection with saccharin.

President.—We shall see Mr. Lloyd about it. In all fiscal matters every prudent Government assumes that there is a good deal of leakage either by smuggling or by inefficiency or various other things, and every Government has to take that risk. The question arises to what extent any Government is justified in taking that risk. We all know that all human institutions are very frail and very defective. Every Government department must make allowance for that, *viz.*, that there would be smuggling; that there would be inefficiency; that there would be evasion and thousand and one other things. Taking all these things into account it has got to make up its mind whether it should take that risk or not. So far as you are concerned, you are not prepared to take any risk as regards the collection of the Customs duty.

Mr. Watkins.—It is not my duty to take any risk. It is Government taking the risk.

President.—From the administrative point of view Government lays down the policy. Government takes the risk. Then the authorities who administer that policy also have to take a certain amount of risk. So far as you are concerned you say that the administrative authority should take on risk. That is what it comes to.

Mr. Watkins.—I think so.

President.—That is your view.

Mr. Watkins.—Quite. You can take that as my view. I should be prepared to take a risk if you came along with a hat and said that it was the hat which you sent home for repairs. But I certainly would not take any risk in the matter of any commercial importation. I am given no authority to do so, and it is not part of my business.

President.—In every administration, whether it is Customs administration or any other administration, there is always a certain amount of risk by which I mean that a certain amount of allowance has to be allowed for human frailty.

Mr. Watkins.—That has to be made by the administration and not by the executive officers.

President.—The administration says "all right, our executive is also frail like ourselves and we know that they make mistakes and we know that other people may cheat them". Having taken all these into account, the higher authorities say "all right, there is nothing unreasonable in that". So far as your point of view is concerned, you think that from the administrative point of view there should be no risk whatsoever.

Mr. Watkins.—To get down to the actual fact—it seems to me that we are digressing—if the Government of India decide that there is no risk or decide to take the risk if there is any in collecting its Customs revenue by means of tickets I am prepared to carry out their orders. If the Government of India tells me that I have to charge Rs. 1-8-0 or any particular amount on matches coming into this country, then I am not prepared to take the risk and go on the basis of tickets.

President.—Government would also realise that there is this risk of forgery.

Mr. Watkins.—If they take the risk and ask me to accept the tickets.....

President.—They will ask you to exercise reasonable care to detect forgeries.

Mr. Watkins.—Government are never going to ask me as a revenue officer to go into the antecedents of all goods to the extent of finding out who has been given the batches of tickets, who has purchased them, etc., to my mind, it is absolutely impracticable. The Swedish matches at one time were actually shipped from London.

President.—Even to-day they are? So far as Swedish matches are concerned I don't think that Government will run any serious risk.

Mr. Watkins.—There might be Spanish matches coming from London, or matches which have never been manufactured previously by countries held in stock in London. The London people are not in the least interested. All we see here is an invoice for so many cases shipped from London to Mr. A. bearing value so much and we can even call on the Bank to produce documents and so on. We never get further back than the fact that they did come from London. It is only in very exceptional cases that we should demand the manufacturer's invoices. A case happened not long ago and we called for the manufacturer's invoice. That was goods supplied from America to some one in England and the man in England protested very strongly and said "how are we going to do business if we are to send out to India the original invoice from our American manufacturers". It can't be done as a regular practice. It can only be done in very exceptional cases in which there are grounds for enquiry.

Dr. Matthai.—You give us here a table showing the total imports of matches into British India for 10 years previous to 1911 and the figures are figures of value.

Mr. Watkins.—We have not got the quantities.

Dr. Matthai.—Even then you were doing it on the basis of real value.

Mr. Watkins.—Yes.

Dr. Matthai.—Have you any records of the real value for say two or three years?

Mr. Watkins.—Not as far back as that. Do you mean to get an idea of how many gross there were?

Dr. Matthai.—Yes.

Mr. Watkins.—It is impossible to get it. The ordinary thing is we make a list from the market values which is actually printed. Recently I gave orders that copies of that should be kept until the peripathetic auditor came round so that if at any time he wanted to make any enquiry into the market value we should have a record. But we certainly should not have a record covering more than the time since the auditor last came round to inspect.

Mr. Mathias.—From your statement C it appears that in the course of ten years from 1900-01 to 1909-10 the consumption had almost doubled.

Mr. Watkins.—Yes.

Copy of letter No. 2699/27, from H. H. Hood, Esqr., Collector of Customs, Karachi, to The Secretary, Tariff Board.

With reference to your letter No. 1017, dated the 14th instant, I have the honour to enclose two Statements marked "A" and "B" showing the statistics of matches re-exported and transhipped at Karachi to Indian States and Indian Ports not British during the year 1921-22 to 1926-27 and the period from 1st April to 30th November 1927.



सत्यमेव जयते

"A."

Statement showing the quantity and value of matches re-exported from Karachi to Indian States and Indian Ports not British during the years 1921-22 to 1926-27 and eight months ending 30th November 1927.

Port to which exported.	1921-22.		1922-23.		1923-24.		1924-25.		1925-26.		1926-27.		8 months ending November 1927.	
	Quantity gross of boxes.	Value. Rs.	Quantity gross of boxes.	Value. Rs.	Quantity gross of boxes.	Value. Rs.	Quantity gross of boxes.	Value. Rs.	Quantity gross of boxes.	Value. Rs.	Quantity gross of boxes.	Value. Rs.	Quantity gross of boxes.	Value. R.
Baluchistan (Agency Tracts)	1,005	2,007	1,769	4,976	1,760	4,890	1,852	4,576	1,200	3,085	4,250	10,681	3,950	10,089
Cutch	25,295	50,911	354	1,025	50	150	1,100	3,350	350	1,050	4	10	...	...
Kathiawar	12,145	23,091	4,206	10,780	4,928	14,071	3,500	8,257	...	...	1,150	2,775	...	...
Goa	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	38,445	76,009	6,329	16,781	6,738	19,111	6,452	16,183	1,550	4,135	5,404	13,416	3,950	10,089

"B."

Statement showing the number of cases of matches transhipped at Karachi to Indian States and to Foreign Ports in British India during the years 1921-22 to 1926-27 and the period from 1st April to 30th November 1927.

—	1921-22.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.	1927-28 (April to November).
	Cases.	Cases.	Cases.	Cases.	Cases.	Cases.	Cases.
Kathiawar	195	1,775	1,955	3,075	...
Baluchistan Agency Tracts	20	...	...
Total	195	1,775	1,975	3,075	...

NOTE.—Particulars of gross of boxes and value are not available.

Collector of Customs, Calcutta.

Letter No. 7218, dated the 11th February 1928.

I have the honour to refer to your letter No. 140, dated the 7th February 1928.

2. Prior to the receipt of your letter I had examined the statistics of imports of matches into Bengal, and as my examination brought to light certain important errors, and it is possible that you are making use of these figures, I think it will be as well to give you a little more accurate information than is to be obtained from the published figures.

3. I give below information regarding some of the more important brands now imported into Calcutta.

Brand.	No. of gross per case.	No. of sticks per box.	C.i.f. cost per gross.	Market rate ex duty per gross.	Importer.
			Rs. A P.	Rs. A. P.	

I. Japanese.

"Gekkin"	50	90/92 Av.	1 1 6	1 3 0	M. N. Mehta.
"Household"	50	92/94 „	1 0 0	1 2 0	Super Mantosh and Company.

II. Swedish.

"Three Stars"	100	67 Av.	0 12 0	0 15 0	Forbes, Forbes Campbell and Company.
"J. W. Star"	50	88/90 „	1 2 0	1 3 0	
"Templiers"	50	...	1 2 0	1 3 0	
"Blue Globe"	50	56/57 Av.	1 0 0	1 3 0	
"Jungle"	50	75/78 „	1 0 0	1 3 0	
"Original"	50	88/90 „	1 2 0	1 3 0	
"Stag"	50	88/90 „	1 2 0	1 3 0	
"Ship"	50	88/90 „	1 2 0	1 3 0	Forbes, Forbes Campbell and Company.
"Delhi Durbar"	50	88/90 „	1 2 0	1 3 0	

III. Norwegian. (Sulphur Matches.)

"Medal"	50	70/73 Av.	1 3 0	1 5 0	Forbes, Forbes Campbell and Company.
"Original"	50	76 „	1 2 0	1 3 0	

IV. British. (Book safety matches, all for advertising purposes.)

	No. of cartons per case.	No. of sticks per carton.	C.i.f. cost.	
"Nill"	50	2,000 contained in 100 book-lets.	15s. or Rs. 10 per 1,000 book-lets.	Market rate. Not sold whole-sale.

"Half-size" boxes are not imported in any quantity into Bengal. The c.i.f. cost is generally three to four annas less than that for the full-sized box of the same brand. I should add that so far as the Swedish matches are concerned the c.i.f. price represents only a price from principal to agent, and should not be regarded necessarily as by any means the lowest figure at which Swedish matches can be landed here.

4. Having read the evidence taken in Bombay I should like to add my support to Mr. Watkins' view that it would not be feasible to use revenue labels for the collection of customs duty. I would go further and say that I should be exceedingly reluctant, even if the duty were paid in cash, to undertake the responsibility for seeing that all imported matches were labelled. For the collection of a specific duty it is often sufficient to open one case from a consignment of many cases and to select one or two boxes from a single packet. The dimensions of the cases give us a very accurate notion of the total number of boxes they contain. A consignment of 50 cases of "Three Stars" contains $50 \times 100 \times 144$ boxes; we may not examine more than half-a-dozen, i.e., less than one-thousandth part of one per cent. of the whole consignment. The amount of examination necessary to check the proper affixing of labels would be far greater than this, it would cause my staff a great deal of trouble and would depreciate the value of the consignment to a very considerable extent.

5. I cannot conceive that any firm of importers would set up the plant necessary to affix labels in bond. Not merely the labelling but the making up into packets of dozens would also have to be done in bond, presumably by machinery, and no manufacturer would undertake this unless he were prepared to go further and do the whole of his manufacture in India.

6. I am afraid I am not among those who regard an excise duty as feasible in India. However easily it may be workable in smaller and more advanced countries, I consider that the Indian State's difficulty would be insuperable. To attempt to prevent illicit sales in the same way as illicit sales of liquor are put down, would require a much greater staff, with the further complication that the revenue to be protected would be central and not, as in the case of liquor excise, Provincial.

7. Finally there is the possibility of the sale of loose matches. These sold readily in Calcutta when the heavy duty was first imposed on veneers, and it might easily grow into a very big business if an excise duty were imposed. This is a development which has not had to be faced, in all probability, in those countries where an excise duty is in force, but it is almost certain that it would have to be faced here.

8. For what it is worth my own view of the very difficult dual problem with which the Tariff Board is faced, is that there is only one solution if the Government are not prepared to forego their match revenue altogether. That is to lower the revenue duty to a figure at which the Indian manufacturer can just, and only just, compete if his factory is run on sound modern lines. Experiment is probably the only method of deciding what that figure is and I should suggest halving the present duty in the first instance and watching results. If it were found that the revenue was increased while a number of less well-organised factories went out of business, I think Government would have every reason to congratulate themselves.

Excise Department, Burma.

Letter from the Excise Commissioner, Burma, dated the 22nd April 1927.

I have the honour to return herewith the copy of the record of my evidence received with your letter No. 305, dated the 12th April 1927. My corrections to the record are in red ink.

I also enclose a short note on the collection of an excise duty on matches, as promised.

Note on the collection of an excise duty on matches.

I have visited the four match factories in Burma. All manufacture is conducted in factories and there is no manufacture of matches on the Cottage Industry scale here. It is therefore somewhat difficult to frame proposals which will cover Cottage Industry manufacture, and it is possible that the methods of collecting duty suggested below may not be applicable to conditions in other provinces. It seems to me, however, that if it is difficult to collect duty on matches manufactured under the Cottage Industry system and if it is essential to obtain revenue from matches manufactured in India, it would be better to abolish the Cottage Industry altogether and to issue licenses to manufacture matches only to big factories capable of supporting a whole time Excise Officer in charge.

2. So far as large factories are concerned, there should be no difficulty in assessing and collecting an excise duty. The best method seems to me to be to assess the duty on issues from the factory, as shown in the manufacturers' books, which should be checked by a Resident Excise Officer. As an additional safeguard, all completed packets of matches should be placed in a warehouse under double locks, one key being kept by the Excise Officer and all matches not yet packed should be placed every night in a secure compartment which would similarly be under double locks. Issues from the warehouse would be made on gate passes issued by the Resident Excise Officer after payment of duty.

3. The smaller manufacturers in Burma object to the system of pasting a stamp round every box being introduced. They say that if this is done by hand, it will add considerably to their cost of production, and that if it is done by machinery after the boxes are filled there will be danger of fire from concussion with the machinery. There is also the difficulty that the stamps might be removed by small shop-keepers and used again by unscrupulous manufacturers and the difficulty of dealing with imported matches under such a system. It seems probable also that the cost of maintaining a watch for unstamped match boxes offered for sale in petty retail shops all over the country will be higher than the cost of supervision at the source. Moreover the opportunities which a stamp system will offer to subordinates for harassing petty shop-keepers may tend to make the Excise duty very unpopular. I am therefore of opinion that this system would be unsatisfactory and should not be adopted.

4. For each factory the staff required would be one Excise Inspector on a salary of Rs. 175—10—295 and a peon on Rs. 17—21. The average cost of this establishment would be roughly Rs. 3,000 per annum for each factory. If we assume that the cost of establishment to collect the excise duty should not exceed 5 per cent. of the duty, it follows that each factory should be capable of producing sufficient matches to pay Rs. 60,000 per annum in duty. If this duty is fixed at 8 annas per gross of boxes no factory should be licensed to manufacture matches unless it is capable of producing 120,000 gross of boxes per annum, and failure to produce that quantity in any year should be regarded as a good ground for refusing to renew the license in the following year.

5. As regards Cottage Industry manufacture, this could be taxed by means of a composition duty, based either on the implements employed or on the raw materials purchased, and fixed at a rate equivalent to the direct duty rate. A similar system is in force in connection with salt in Burma. A direct duty is levied on salt manufactured in proper factories in coastal districts in Lower Burma while a composition duty based on the number and size of the cauldrons used for boiling is collected in Upper Burma. I understand that the Cottage Industry match manufacturer must have a frame in which to fix the match splints before they are dipped, that he may also have a chopping machine for making splints, and that he has to purchase veneer from a large factory. A composition duty might be assessed on the number of frames and chopping machines used or on the quantity of veneer purchased. The frames and chopping machines would be of fixed sizes, and the average

output of each machine could be estimated and the rate of duty fixed to make it approximate to the direct duty. If the duty was based on the quantity of veneer purchased the average output from a certain quantity of veneer could be similarly estimated. Licensed Cottage Industry manufacturers could be compelled to purchase their veneer from a big licensed match factory and the quantity purchased could be checked by the Resident Excise Officer at the big factory. The Resident Excise Officer at the nearest big factory could probably find time to inspect these Cottage Industries and see that no unlicensed implements are being used and that full duty is being paid. In that case no extra staff could be necessary.



EXCISE DEPARTMENT, BURMA.

B.—ORAL.

Evidence of Mr. J. B. MARSHALL, C.I.E., I.C.S., Commissioner of Excise, recorded at Rangoon on Monday, the 28th March 1927.

Introductory.

President.—Mr. Marshall, you are the Excise Commissioner of Burma.

Mr. Marshall.—Yes.

President.—Is the Excise Department under the Government of India or is it purely a Provincial Department?

Mr. Marshall.—It is purely a Provincial Department. It collects the duty on salt for the Government of India which makes a contribution to the Provincial Government.

President.—Is salt the only excisable article which forms part of the Central Revenues?

Mr. Marshall.—That is the only one I am concerned with. There is a petrol excise duty, but I have nothing to do with it at all.

President.—I think that that is collected by the Government of India from the oil Companies direct.

Mr. Marshall.—I don't know. Nothing about it has ever come to me.

Mr. Mathias.—Do you perform any other function, for example Registrar of Joint Stock Companies?

Mr. Marshall.—No, I am only concerned with excise and salt. Formerly I was Inspector-General of Registration, but that has been taken over by the Financial Commissioner.

Dr. Matthai.—Do you mean you held that in addition to the duty that you now perform?

Mr. Marshall.—Yes.

Mr. Mathias.—Are you the Superintendent of Stamps?

Mr. Marshall.—No.

Mr. Mathias.—Who performs that function?

Mr. Marshall.—The Collector of Rangoon.

Mr. Mathias.—For the whole of Burma.

Mr. Marshall.—The Deputy Commissioner of each District is also the Collector of Stamps, but the Collector of Rangoon is the senior stamp authority.

Mr. Mathias.—Corresponding to the Superintendent.

Mr. Marshall.—I think so.

Salt Excise and Duty.

President.—Then salt I take is a Government monopoly. Is it manufactured under license?

Mr. Marshall.—It is manufactured under license but I would not call it a Government monopoly.

President.—It is a monopoly in that you have got to take a license and you have got to pay the excise duty.

Mr. Marshall.—Yes.

President.—There is also a Customs duty on salt. By whom is that collected?

Mr. Marshall.—By the Customs.

President.—Is there any conflict in the administration between the Customs and the excise as regards salt?

Mr. Marshall.—None at all.

Dr. Matthai.—You are not concerned with salt.

Mr. Marshall.—The excise duty on salt is collected by me and by my staff.

President.—Then as regards smuggling of salt, are you responsible or the Customs Authorities?

Mr. Marshall.—If it is smuggled from outside, the Collector of Customs is responsible. I am responsible if it is being illicitly manufactured.

President.—Whether by land or sea it is the Customs Authorities who are responsible for smuggling.

Mr. Marshall.—There is no smuggling by land. I suppose I should be responsible for smuggling by land, but there is not any.

President.—Because it is very heavy and there is very little to be gained by it.

Dr. Matthai.—Do the Government produce salt?

Mr. Marshall.—There is an experimental demonstration factory in Kyaukpyu District. That will only go on for two or three years. Afterwards it will be handed over to somebody.

Dr. Matthai.—Generally it is produced by private agency.

Mr. Marshall.—Yes. It is kept under double lock until the duty is paid. After that the licensee can sell it to anybody he likes. It is really manufactured in an outside place where the cauldrons are and it is put through a grating into bond.

Dr. Matthai.—It comes into your possession as a finished article and then you keep it under lock and key.

Mr. Marshall.—Under double lock. One key is held by the licensee and the other is held by the Salt Factory Officer, who is a Sub-Inspector.

Mr. Mathias.—What do you mean by double lock? Do you mean that it cannot be opened except by the Government's representative and the licensee at the same time.

Mr. Marshall.—Yes.

President.—In how many places is salt manufactured?

Mr. Marshall.—Most of it is in the Amherst District and there is quite a lot in the Kyaukpyu, Sandoway, Tavoy, Mergui, Hanthawaddy, Thaton, Akyab and Bassein Districts, altogether nine in all. In Upper Burma, we have got a system by which the licensee pays so much per cauldron or per pot. That is manufactured on a very small scale.

President.—The other one is on a fairly large scale.

Mr. Marshall.—Yes.

President.—How many bonded warehouses do you have in Burma?

Mr. Marshall.—There is one warehouse for each factory.

President.—I want to have a rough idea.

Mr. Marshall.—Without looking up the Salt Administration Report, I am sorry I cannot tell you off hand.

President.—Is the number too large. From the economic point of view does it pay the Government to have so many bonded warehouses for salt?

Mr. Marshall.—I think it would be more economical if small factories were all abolished and there were big factories producing three or four lakhs of viss per annum. There are some small factories producing only 10,000 viss which are not big enough to make the thing a success. One viss.=3.6 lbs., 100 viss=4.375 maunds.

President.—The point arises in connection with the match industry in this way. If the manufacture of matches was not a Government monopoly, then the question might arise in what way the excise duty should be levied. If we adopted the same system as you have in the case of salt, it might mean that

in different parts of the province you must have an inspector, office and so on for each small match factory.

Mr. Marshall.—Yes.

Dr. Matthai.—Roughly how many salt factories are there in Burma?

Mr. Marshall.—It is very difficult to say without the book.

President.—If you just fill in the figure when you correct the evidence, that would be enough.

Dr. Matthai.—You could not tell roughly what is the proportion of the collection charge to the total receipt.

Mr. Marshall.—I can tell you from the Salt Administration Report.

Mr. Mathias.—What staff is attached to the warehouse?

Mr. Marshall.—It depends on the area. In some areas where there are a lot of factories close together you will have one officer looking after 10 or 12 factories each with a warehouse and in other places where the factories are far apart, there may be two officers.

Mr. Mathias.—In some cases you will have factories where there is not enough work for one man.

Mr. Marshall.—Sometimes yes. He can do other work. He can do preventive excise work in his spare time.

Mr. Mathias.—You have to find work for him.

Mr. Marshall.—The work is there. If he wants work he can do it.

Application of an excise duty to the manufacture of matches.

President.—There are only four match factories in Burma and they are all situated in Rangoon.

Mr. Marshall.—Yes.

President.—Assuming that most of the factories were in Rangoon, would it mean very much additional work for the Excise department to protect the Government revenue?

Mr. Marshall.—If all the matches manufactured were to be kept under double lock and key and counted for the purpose of assessing the duty, it would mean a good deal.

President.—Ordinarily you would not have to count the matches, but you will have to count the boxes. If there are 2 million gross a year at the present production, ordinarily you could do it by measurement. You won't have to count it in the ordinary way. It may be possible to do it by simple measurement.

Dr. Matthai.—If you counted the tins and examined one or two tins casually, that would be all right.

Mr. Marshall.—It seems to me that it would not be very much work.

Mr. Mathias.—Supposing it was prescribed that the match companies should send you monthly returns of production, it would be necessary for your inspectors to pay occasional visits and check up these returns by measurement of the actual matches in stock. I suppose it would not be very much work.

Mr. Marshall.—No, it would be quite simple. You would take the manufacturers' accounts as correct subject to occasional check by some of my staff.

Mr. Mathias.—You can check it approximately at the end of the year from their account books.

Mr. Marshall.—Yes.

Mr. Mathias.—A very simple system of accounting could be prescribed showing the total amount of wood purchased and the number of boxes turned out.

Mr. Marshall.—There would not be any very great difficulty about that.

President.—Burmans do not keep any books. As regards salt, do you have to go into the account of manufacture or do you simply have so much quantity of salt put into the bonded warehouse, weigh it and charge the duty?

Mr. Marshall.—When I inspect the salt fields I enquire from the salt manufacturers how much they pay for fuel, how much they pay for labour and work out the cost of production simply with a view to checking whether there is any probability of salt being manufactured without duty.

Mr. Mathias.—That is checked from time to time.

Mr. Marshall.—Yes.

President.—Manufacture is not carried out under bond. You have not got what are called bonded factories such as in the United States where everything is manufactured. In the United States nothing can be done except in the presence of Customs or Excise Authorities.

Mr. Marshall.—In this case in Burma salt is actually boiled outside. Anybody can get into the boiling room. It is only the store room that is locked. Of course it is a breach of the condition of license if they don't put all the salt manufactured into the room straight away.

President.—Have you any reason to suppose that any salt that is actually manufactured is not put into the bonded warehouses?

Mr. Marshall.—From the figures they give me of their cost of manufacture and from what I know of the price at which they sell salt, it seems to me probable that a lot of salt escapes paying duty.

President.—Therefore it would be advisable for Government to keep some supervision during manufacture. The same thing might happen in the case of matches.

Mr. Marshall.—Yes, except that in the case of matches we will be dealing with big capitalists.

President.—Some of them are not very big. As regards the biggest of them I have no doubt that very little supervision might suffice, but as regards the smaller ones, matches are not entirely manufactured in the factory. They carry out some of the processes there and the materials are handed out to outside labour. In such a case it would be very difficult to check unless you are actually present in the factory and keep an account of the quantity of splints, veneers and labels handed out to outsiders which go to the making of finished matches. As regards the smaller factories, I am not so sure that supervision on a considerable scale might not be required if the Government were to collect excise revenue in the same way as salt.

Mr. Marshall.—You will have a responsible excise Officer in each factory.

Dr. Matthai.—When you issue a license you charge a fee.

Mr. Marshall.—No, not for salt licenses.

The stamped label system.

President.—One alternative that struck me is to insist that every box should be labelled and stamped just as they have in Europe for chemicals and in some places for matches and other excisable articles. That is to say if a man who wants to manufacture matches buys as many stamps as he wants and puts them on the boxes and the law forbids the sale of any matches which do not bear this label, do you see any great difficulty in such a system?

Mr. Marshall.—I have no experience of such a system. Does anything prevent the boxes being used over again?

President.—It is pasted over the ends.

Mr. Marshall.—As is done with soda water bottles at home or on patent medicine.

President.—You will find them in drugs and patent medicines. I have seen them on matches in some parts of the Continent.

Mr. Marshall.—You charge the manufacturer with the cost of printing *plus* the duty.

President.—That would be the duty that he has got to pay.

Mr. Marshall.—Would not the cost of printing be a considerable proportion to the revenue.

President.—Considering now the quarter anna stamp which is printed, a little more paper will probably be wasted, but I don't think the cost would amount to very much. It is a very narrow strip of paper bearing the Government stamp and it will show the amount of duty paid.

Mr. Marshall.—We have no system at all like that at present in Burma.

President.—I don't think we have in India either.

Mr. Marshall.—I don't think there will be any difficulty.

Dr. Matthai.—You don't think that there will be any abuse of the system.

Mr. Marshall.—No.

Mr. Mathias.—Do you foresee any difficulty as regards inspection to see whether such boxes are properly stamped at the shops where they are sold?

Mr. Marshall.—You would have to make it a criminal offence to sell boxes without stamps. In that case, police and preventive officers would inspect and prosecute.

Mr. Mathias.—Take Rangoon for instance.

Mr. Marshall.—We can check all the shops easily.

President.—So long as it is made a cognisable offence, there should not be much difficulty.

Mr. Marshall.—No.

Mr. Mathias.—You must remember that matches are sold by small people to whom even a little profit would mean a great deal. If the shopkeeper could devise some method by which he could remove the stamps, he would do it.

Mr. Marshall.—He would have to act in collusion with a manufacturer.

Mr. Mathias.—The shopkeepers might act in collusion with small manufacturers.

Mr. Marshall.—They would have to act in collusion with some manufacturer to get unstamped boxes on which they could use the old stamps.

President.—You could perforate it in such a way that it would be difficult for anybody to remove the stamp.

Mr. Mathias.—I will put it this way. It would be a matter which would require careful investigation. After considering the cost of stamp, the possibility of fraud and so on and the outturn of very small match factories it would be a matter for consideration whether the balance of advantage would be in favour of making the excise duty, if it is levied, applicable to all factories turning out more than a certain amount. Would you agree that it would be a matter for consideration or would you be able to say that there would be no difficulty at all?

Mr. Marshall.—I could not say off hand that there would be no difficulty.

President.—In a case like this, it will be necessary for us to examine some expert manufacturer of labels who may be able to tell us that the labels once used can be easily detected if they are used again.

Dr. Matthai.—Supposing we had two alternative methods—one as suggested by the President by means of stamps and the other by simply asking each producer to send in periodical statements about the output which you check which of the two methods is likely to prove less unsatisfactory?

Mr. Marshall.—I have no experience of a stamp system of collecting revenue at all. I think that it would be more satisfactory to have all matches manufactured put under double lock and checked by an excise officer.

President.—In the case of the match industry where veneers can be manufactured in one place and the box making in another, the owners of big factories, in order to evade the duty, would distribute the splints and veneers to outside people. You would have no control then even on big factories.

Mr. Marshall.—You might prevent that by having all matches manufactured in big factories.

President.—That is one of the points we have to investigate. We have to consider on what scale the industry is carried on. If the percentage of manu-

facture, on the cottage model, is high compared with the manufacture on a large scale, then obviously we must devise a system by which the law could not be evaded by the smaller factories. Even to-day I think in India, for instance, there are only two very big factories. The rest are not cottage industries but small factories.

Dr. Matthai.—You have no idea how they levy excise in the United Kingdom.

Mr. Marshall.—No.

President.—Supposing the label is put on matches manufactured in India, you will have to have labels on imported matches. Obviously you must compel the foreign manufacturer also to buy Indian labels.

Mr. Marshall.—They have got to show whether they are made in Burma, in Sweden or in Japan.

President.—They have to.

Mr. Marshall.—A false declaration on labels should be punishable.

President.—It would be like this. They may manufacture the labels in this country and say 'this is made in Sweden' simply to evade the excise duty, and then it is put on the market.

Mr. Marshall.—That would be a criminal offence.

President.—It would be undoubtedly. The foreign manufacturer may buy the labels and put them on when he is manufacturing matches in his own country. I should not think that there would be much difficulty about that. For instance, Sweden can buy as many labels as she wants for export to India.

Mr. Marshall.—It could be done here also.

President.—It would be cheaper for them to do it in their own country. Then, the Customs authorities could simply count these and pass them. Unless the law forbids the sale of matches without labels which would be equally applicable to both domestic and foreign matches, there would be a lot of difficulties.

Mr. Marshall.—I agree.

Local excise.

President.—As regards the local excisable articles I think that alcohol is the principal one.

Mr. Marshall.—Yes.

President.—What is the system there?—Is it what they call a farming system?

Mr. Marshall.—Different systems apply. In the case of country spirit, it is manufactured in a distillery by a contractor. He is given a certain area. He sends out the spirit to the warehouse in that area where it is kept in bond and issued from there to the shops on payment of duty *plus* the distiller's price.

President.—Are retail prices fixed by law or by the retailer?

Mr. Marshall.—There are two districts in which maximum prices are fixed. In the other districts the retailer can sell at any price he likes. I don't think that the maximum price has been a very great success.

Mr. Mathias.—If an excise duty were levied on matches, of course it would go to the Central Revenues.

Mr. Marshall.—I was just wondering about that.

Mr. Mathias.—As a rule where countervailing excise is imposed, in order to recoup loss of Customs revenue, on goods manufactured in this country on which when imported there is a Customs duty, the excise as a rule would go to the Central Revenues.

Mr. Marshall.—Yes, if it is to replace Customs revenue which is being lost.

Mr. Mathias.—According to the terms of reference, we have to investigate the question of an excise duty to compensate for the loss of revenue

owing to the decrease in the import of matches. It would normally follow that the receipt of excise on that would go to the Central Revenues.

Mr. Marshall.—Except that it is open to the objection that an excise receipt should generally be a provincial one.

Mr. Mathias.—The cotton excise was central and following on that analogy the excise on matches would be central.

Mr. Marshall.—Yes, on that analogy.

Mr. Mathias.—Assuming that it is Central the provincial Government would have to undertake the collection of that. In that case, would the provincial Government do so free of cost?

Mr. Marshall.—They would expect payment of the cost of collection as is done in the case of salt.

Mr. Mathias.—The point I am getting at is this. We shall have to investigate the question as to whether it is necessary for Government to place an excise to compensate the loss of Customs. In that connection we should want to know what the nett result of placing the excise duty would be. Can you give us an idea as to what would be the cost of collection by the provincial Government?

Mr. Marshall.—It would have to be worked out after it has been started. You cannot tell how many extra men will be required. If you are to have an excise inspector for each factory, his pay on an average will be Rs. 225 a month. He will have to be given a peon on Rs. 20. Thus, the total cost will be Rs. 245 p.m., for each factory.

Mr. Mathias.—I take it that the cost of collection as against receipts would not be considerable.

Mr. Marshall.—I have no idea of what the receipts would be.

President.—An officer of the grade of inspector would be good enough for a job like that.

Mr. Marshall.—I think so. We have only got sub-inspectors in charge of salt factories on a pay of Rs. 50 to Rs. 100.

President.—But salt is a pretty bulky article. One gross of matches costs Re. 1-8-0.

Mr. Marshall.—It is better for the Central Government which is going to get the revenue to have a trained staff.

President.—The idea at present is that as far as possible, the sources of Central revenue should be looked after by the Central Government as they are doing in the case of the income-tax.

Mr. Marshall.—Yes.

Mr. Mathias.—There are many exceptions to that.

Mr. Marshall.—Salt is an exception.

Mr. Mathias.—The cotton excise was collected by the provincial Government?

Mr. Marshall.—It was not collected by the Excise Department.

Dr. Matthai.—The excise on salt is collected by the Central Government in Madras. They have got a Salt Commissioner.

Mr. Marshall.—I think so.

President.—That would be an obvious course for the Central Government to adopt if it is a biggish matter.

Mr. Marshall.—I think so too.

Mr. Mathias.—Do you mean that the whole of the staff could be put under the Collector of Customs or the Commissioner of Income-tax.

Mr. Marshall.—Yes.

President.—The Commissioner of Income-tax is more suitable because he has officers all over the province.

Mr. Marshall.—Yes.

Mr. Mathias.—You have no Director of Industries.

Mr. Marshall.—No.

President.—I find in some countries—I think in the Federated Malay States—they have got a double system of excise on matches. Where they use imported materials they have to pay at a higher rate. But it does seem to me that it would be simple to increase the duty on the imported materials. For instance if you increase the duty on logs, the situation might be met better. All manufacturers may have to import chemicals and things like that. Supposing we came to the conclusion that as far as possible indigenous wood ought to have preference from the excise point of view, would you be in favour of rather increasing the duty on the principal raw material or would you suggest that all matches manufactured out of imported articles should have a different excise. From the administrative point of view I think it would be simpler to increase the duty on the imported materials.

Mr. Marshall.—Yes.

President.—Otherwise you will have to keep more supervision during manufacture.

Mr. Marshall.—Yes.

Dr. Matthai.—Coming back to the question of intoxicating liquor, I believe there are two elements in that. You have a sort of fixed duty which you levy on issue from the warehouse.

Mr. Marshall.—Yes.

Dr. Matthai.—And there is also a variable duty on sales.

Mr. Marshall.—No. We simply put it up to auction.

Dr. Matthai.—The duty on sales varies.

Mr. Marshall.—The license fee varies.

Dr. Matthai.—Would you suggest such a distinction here, one purely levied on production and one purely levied on sales of matches?

Mr. Marshall.—It would mean that everybody who wants to sell matches would have to get a license. You will have to extend the system to every single village in the province. Is it to be a license fee for every retailer?

Dr. Matthai.—A license fee for every manufacturer.

Mr. Marshall.—A fixed fee based on the quantity manufactured?

Dr. Matthai.—That is a matter of detail.

Mr. Marshall.—If it is a duty on the quantity manufactured, it would be simpler to levy.

Dr. Matthai.—It may be necessary for us to get a certain amount of control over the production of matches. In that case, the system of license might give just that handle by which we can exercise control.

Mr. Marshall.—It would be a good thing to have a license. If it was found that the duty was being evaded, Government could refuse the license.

President.—In this liquor business the license fee is a premium.

Mr. Marshall.—They bid against each other.

President.—That is apart from production. It is really a salami that Government gets.

Mr. Marshall.—It is partly the price of the monopoly value of the right to sell that form of liquor in a certain area.

President.—It is really like a premium.

Mr. Marshall.—It is the monopoly value of the right to sell the liquor.

Mr. Mathias.—The system assumes that the liquor shopkeepers are a better judge of the quantity of liquor that can be sold in a certain area than Government and that therefore the value of the right to sell liquor in a certain area is best determined by putting it up to auction?

Mr. Marshall.—Yes. The best way of getting the actual value at the present duty rates is by putting it up to auction.

Mr. Mathias.—The capacity of the local consumer is better judged by the retailer than by the Government.

Mr. Marshall.—I would not put it that way. I would say that they can only judge of what they can pay at present duty rates.

Mr. Mathias.—That is to say they are really the best judges of what they can sell at a certain price so that it is really a convenient form of estimating the taxable capacity of a particular commodity.

Dr. Matthai.—If you take toddy revenue it is a tax purely in the shape of a duty on sales.

Mr. Marshall.—Only the license fee is realized by auction.

President.—And the trees may be tapped by any one?

Mr. Marshall.—The owner of the trees taps them and he gets a transport pass to carry it to the licensee. He is not allowed to sell it himself.

President.—About these licenses, I think in Bombay at one time there were two things which were sold by auction, the first was the right to manufacture liquor—of course he paid the duty on production. Then there was another system by which the right to manufacture was not auctioned at all. They called for tenders and they asked how much they would charge Government for manufacturing per gallon. Then of course Government sold it to outsiders adding duty and subsequently the right to sell the liquor in shops was auctioned. Is the latter system in force in Burma whereby Government arranges to manufacture the liquor?

Mr. Marshall.—The distiller manufactures it and he says at what price he will supply it.

President.—On that Government does not get any premium?

Mr. Marshall.—It only gets the duty. The distiller's price does not concern Government but of course the lower the distiller's price the bigger the profit for the retailer and we get more in license fees.

President.—Could this system be applied at all to the match industry? This presumes of course that Government has a monopoly of manufacture, so that unless Government had a monopoly of manufacture it could not keep the manufacture of matches within limit. The idea is that you must first of all restrict manufacture.

Mr. Marshall.—I don't see how it can be applied to matches.

President.—It presupposes such a system that somebody has got a monopoly or the right to restrict the manufacture as they are doing in France to-day. Government there has got a monopoly and it manufactures matches. In respect of that article they are giving the right to manufacture to a company, and the company would sell to retailers at a price fixed by Government. Now, here in this country the industry has gone on for a number of years and there are a number of factories in the country and it would present very serious difficulties if Government were to say "you have got to close down" and people have to buy matches from factories licensed by Government or from factories under control. There are now 50 to 100 factories in India to-day: could Government introduce the system that you have got?

Mr. Marshall.—I don't think we can.

Mr. Mathias.—Any system of that kind to be applied to matches would mean the acquisition of these factories?

Mr. Marshall.—Yes, we would have to pay compensation of some kind.

Dr. Matthai.—The real difference between liquor and matches is that while the object of the former system is to restrict consumption, in the case of matches there is no need for restriction, that is the vital difference, is it not?

Mr. Marshall.—Yes.

President.—Under the distillery system does Government provide the distillery?

Mr. Marshall.—No; that is private capital.

President.—I think in other provinces Government has to provide the distillery building and appliances, or Government has got to take it over on a valuation on the expiry of the license. In the olden days what they did was

to make some sort of valuation, allowing so much for depreciation, etc., and the man had to take it over at that price whether he liked it or not.

Mr. Marshall.—As far as I know Government has no liability in connection with these distilleries at all.

President.—I wonder whether you can get a man at all in that case?

Mr. Marshall.—These two distillers—Leong Chye and Dyer, Meakin & Co. have been in the business for years.

President.—These two men got a monopoly practically owing to these factories being of some importance?

Mr. Marshall.—There was a third distillery at Toungoo but it is not being used now.

President.—If the Government were to introduce a monopoly system either it would have to provide the factory to the manufacturer or enter into a long term contract with him and compensate him on termination of the contract.

Mr. Marshall.—That has not been necessary in Burma so far as distilleries are concerned, but it seems to be fair.

President.—Or Government may give a long term contract to the manufacturer for a number of years, say, 20 years, and say “you are getting a monopoly to manufacture and we shall take so much out of the profits.” That would be one of the methods of working a monopoly.

Mr. Marshall.—Yes.

President.—What I want to know is, from the excise point of view can a monopoly be worked by giving indiscriminate licenses to anybody who came forward to manufacture?

Mr. Marshall.—I think that would be difficult.

President.—That would mean of course that every factory will have to have somebody familiar with the process of manufacture on behalf of Government to see what they were doing, how much they were producing and so on.

Mr. Marshall.—That is so.

President.—So that the two alternatives that are really left now are those that we were discussing, firstly labels and secondly bonded warehouses.

Mr. Marshall.—Yes.

President.—Can you give us a list of salt factories?

Mr. Marshall.—269.

President.—What is the average output of a factory?

Mr. Marshall.—The average output is roughly a little over 2,000 maunds a year. The duty is Re. 1-4-0 a maund that is about Rs. 3,000 duty per factory.

President.—How many inspectors have you got?

Mr. Marshall.—On purely salt work we have got 6 inspectors, 38 sub-inspectors and 55 peons.

President.—How do they inspect these factories?

Mr. Marshall.—36 Sub-Inspectors to 269 factories, that is 7 to 8 factories to an inspector. Sometimes there are as many as 13 or 14 under one Sub-Inspector.

President.—Can the factories be inspected in a day?

Mr. Marshall.—Yes, because in the salt producing area they are all quite close together.

President.—What is the total cost of your inspection department?

Mr. Marshall.—Taking those concerned only with salt, not doing any excise work, the cost is Rs. 1,01,207.

President.—What is the revenue?

Mr. Marshall.—A little over Rs. 6,50,000.

President.—That only includes the inspection staff?

Mr. Marshall.—Yes, it does not include the work done by myself, or by the deputy commissioners or the superintendents of excise.

President.—So that it is a pretty big percentage?

Mr. Marshall.—You have got to remember that customs revenue is also protected by us by prevention of illicit manufacture of salt, and the Customs revenue comes to over Rs. 27,50,000. Prevention of illicit manufacture is all done by the excise department. The amount the Government of India pay is roughly Rs. 2 lakhs, I think. This Rs. 1,01,207 I speak of for the salt establishment is met from provincial funds.

President.—What do you get from the Central Government?

Mr. Marshall.—About Rs. 2 lakhs.

President.—Part of that would be excise and part customs really?

Mr. Marshall.—Yes. They pay 8 per cent. of the provincial expenditure on excise. Customs are actually paid by the Government of India.

Mr. Mathias.—That 8 per cent. includes the work done for the Central Government by all officers, such as deputy commissioners and everyone else?

Mr. Marshall.—Yes, and also includes officers of the salt department. The Government of India are really paying about another lakh, for the work done by officers who are not whole-time salt officers.

President.—And the rest is charged to liquor?

Mr. Marshall.—Liquor and opium. Our revenue from opium is provincial. We buy the opium from the Government of India at approximately the cost price, but the profit we make on it goes to the provincial revenues.

Dr. Matthai.—You gave us the average size of a salt factory. What is the biggest size?

Mr. Marshall.—I am sorry I have not got it with me but I can send the Chief-Superintendent of Salt down who will give you all the details about manufacture of salt.

Dr. Matthai.—I just wanted to have a general idea of the proportion of small salt factories which it would be uneconomical to work from the revenue point of view.

Mr. Marshall.—I think it would be about 40,000 viss.

President.—Would it be very troublesome for you to give us a sort of provincial statement as to what it would cost the Government to levy an excise on matches on the assumption that it is levied under the bond system?

Mr. Marshall.—It would be largely a matter of guesswork I am afraid. I do not know what amount of work would be involved in counting the matches, and supervising storage and issues and so on.

President.—There is no hurry about it. You might go to one of these factories and get an idea when you find time. Burma is a very important province in this enquiry and we should like to get some idea. As regards labels we shall have to work it out ourselves because we have not yet thought it out, but as regards the other system of assessing the duty on issues from the bonded warehouse the point would be to ascertain how far supervision during the process of manufacture may be necessary in order to check production. You may take three or four months over it and in the meantime kindly visit one or two factories and then give us an idea of the cost to Government.

Mr. Mathias.—At the same time could you give us some general idea of what be the cost if a system like the cotton excise system were adopted.

Mr. Marshall.—Yes.

President.—When you inspect a factory you would get, I think, an idea of the sort of supervision it would require, because without that it would be very difficult for you to calculate the cost. It need not be very accurate, we want only an approximate idea. One of the ways in which you can check the production is from the quantity of logs used. It is a very fair indication.

Mr. Marshall.—Yes, in the same way as we check the production of salt by estimating the amount of fuel consumed.

President.—It will be a fairly accurate check because the outturn is pretty well known. So when you have time if you will kindly go into the question and let us have a statement it will be very useful.

Mr. Marshall.—Yes.

President.—If you think of any better method of collecting excise revenue, we should be grateful. It is a new thing for us. Give us your views generally.

Mr. Marshall.—Yes.



सत्यमेव जयते

EXCISE DEPARTMENT, BOMBAY.

Oral evidence of Mr. J. GHOSAL, I.C.S., Commissioner of Excise, Mr J. P. BRANDER, I.C.S., Collector of Satara, Mr. W. HALLOWS, Inspector of Factories and Mr. J. P. REDKAR, Appraiser, Customs Department, Bombay, recorded at Bombay on Tuesday, the 13th December 1927.

Introductory.

President.—Mr. Ghosal, are you the Commissioner of Excise for the whole Presidency of Bombay?

Mr. Ghosal.—Yes, except Sind.

President.—Mr. Brander, you are at present Collector of Satara?

Mr. Brander.—Yes.

President.—Before that, you were Collector of Bombay?

Mr. Brander.—Yes, for six years, from the end of 1919 till about April 1926.

President.—So that you were here when the excise duty on cotton was abolished?

Mr. Brander.—Yes.

President.—Mr. Hallows, what were you at that time?

Mr. Hallows.—I was in the Cotton Excise Department.

President.—You are now in charge of factories, are you?

Mr. Hallows.—I am the Inspector of Factories, Bombay.

Work of the Excise Department.

President.—I should like to understand a little about the organisation and the functions of the Excise Department to see whether we could get any analogy which we may apply to matches in case matches become excisable. What are the principal excisable articles in the Bombay Presidency?

Mr. Ghosal.—Liquor, country and foreign, opium, hemp drugs, and tobacco to a certain extent in the Bombay City.

President.—As regards country liquor what is the system now in force? Is it a Government monopoly of manufacture as well as sale, or what is it?

Mr. Ghosal.—It is a Government monopoly. For some time the right of manufacture was given out by contract. This system is now followed only in one small corner and in the rest of the Presidency it is all Government manufacture at their own distilleries.

President.—Is it entirely departmental manufacture?

Mr. Ghosal.—Yes, except as explained above, at one place, Dabhoda, which has got a small distillery which supplies to Mahi Kantha and Rewa Kantha.

Mr. Mathias.—You manufacture mainly at Nasik, do you not?

Mr. Ghosal.—Yes.

President.—Here then Government manufactures all the liquor; how is it supplied to the vendors?

Mr. Ghosal.—Through warehouses.

President.—What proof do you make?

Mr. Ghosal.—40° to 60° O. P. to make it cheap for convenience of transportation and distribution. We then send this overproof liquor from our distilleries by tank cars to all over the Presidency and from the tank cars it is taken to our warehouses. In each warehouse, it is reduced to the issue strength.

President.—What do you use?

Mr. Ghosal.—Filtered water for reducing. It is then issued direct to the licensee.

President.—That is to say, each vendor has to have a license or is there a general system for a whole district?

Mr. Ghosal.—Each liquor shop has a license.

President.—You don't farm out a whole district as you did before?

Mr. Ghosal.—No, the district monopoly system is gone.

Mr. Mathias.—How long has this system of State manufacture been actually in force?

Mr. Ghosal.—For the last five years.

Mr. Mathias.—Before that, I understand you had contractors?

Mr. Ghosal.—Yes.

Mr. Mathias.—Where were their factories situated?

Mr. Ghosal.—One at Dhulia, one at Mundhwa, one at Surat and one at Godhra, but we have gradually abolished these.

Mr. Mathias.—How did you fix the prices each year with these contractors?

Mr. Ghosal.—The contract period was generally for three years. The price was fixed on the basis of the lowest tender offered, regard being had to other considerations.

Mr. Mathias.—Was the price fixed by the Commissioner of Excise?

Mr. Ghosal.—Yes, with the approval of the local Government.

Mr. Mathias.—On what basis is it effected, is it on the basis of the mowha?

Mr. Ghosal.—The lowest price at which we could get the mowha, the cost of manufacture and other considerations.

Mr. Mathias.—You investigate the cost of manufacture?

Mr. Ghosal.—We know this; we have to know it because all the distilleries are practically entirely under Government supervision.

Mr. Mathias.—You have an inspector at the factory even when it is let out to a contractor?

Mr. Ghosal.—Yes.

President.—What was the reason for this change of policy? Was it because Government thought that it would be cheaper to distil their own liquor?

Mr. Ghosal.—Yes.

Mr. Mathias.—Was that large factory that you had at Nasik to manufacture acetone during the war converted into a distillery?

Mr. Ghosal.—Yes, but it was the property of the Government of India who sold it to this Government after the war.

Mr. Mathias.—The object was in part to utilise a factory building which you had already?

Mr. Ghosal.—Yes, partly we were thinking of starting another factory elsewhere but this came in handy.

Mr. Mathias.—Do you produce at lower rates than the contractors?

Mr. Ghosal.—Yes.

President.—Can you give me any idea as to what saving to Government has been effected approximately by changing over from the contract system to departmental manufacture as regards costs?

Mr. Ghosal.—Contractors seldom sold at less than Rs. 1-5-0 per proof gallon delivered at the distillery, whereas we can easily make it at less than a rupee. The cost price is sometimes fourteen annas.

Mr. Mathias.—Have you ever supplied to any other province this mowha liquor?

Mr. Ghosal.—The Central Provinces Government asked us to supply once.

Mr. Mathias.—Did the Central Provinces Government ask you to supply or did you write and suggest to them?

Mr. Ghosal.—I think they asked us. I only got a letter from the Secretariat to correspond with them direct.

President.—When Government started this departmental manufacture did they have to compensate the original contractors?

Mr. Ghosal.—No.

President.—Did you own the distilleries or the contractors owned them?

Mr. Ghosal.—We owned them.

President.—The whole being including equipment?

Mr. Ghosal.—Sometimes the equipment was theirs, but there was an agreement that at the end of a certain period they would be taken over by Government at a valuation, and in some cases it was stated that they should retain it.

Dr. Matthai.—You were saying a little while ago that cost at Government distilleries is now slightly lower?

Mr. Ghosal.—Yes.

Dr. Matthai.—Are the costs estimated on a commercial basis?

Mr. Ghosal.—Yes. The accounts are audited by the Government of India Commercial Audit Department.

President.—Have you any rules as to how you are to calculate the costs?

Mr. Ghosal.—Yes. We take all the expenditure, materials, capital cost, interest, cost of establishment, etc., as approved by the Audit Department.

President.—You add the interest on the capital?

Mr. Ghosal.—Yes.

President.—What is the usual rate?

Mr. Ghosal.—I think about $6\frac{1}{2}$ per cent.

President.—For depreciation do you charge at the income-tax rates?

Mr. Ghosal.—The rate is settled by an expert for each kind of machinery because depreciation varies with each machine.

Mr. Mathias.—And for working capital?

Mr. Ghosal.—That is looked upon as a permanent advance.

Mr. Mathias.—It is not included in your costs?

Mr. Ghosal.—No.

President.—Do you have to carry very large stocks?

Mr. Ghosal.—Yes, since our consumption is 13 lakhs of gallons a year.

President.—In stock?

Mr. Ghosal.—The quantity mentioned is the issue. We have to carry two or three months' stock at least. We are trying to increase the quantity held in stock as we are aiming at partial maturing.

President.—Is the interest on capital locked up in stocks calculated in the costs?

Mr. Ghosal.—All this is calculated.

Mr. Mathias.—You don't take the working capital as a permanent advance? As regards these stocks, their cost is apportioned to the working capital, is it not?

Mr. Ghosal.—The working capital is small and the minimum, being constantly recouped by sales. The value of the stock in hand is taken into account when calculating profit and loss by the auditors.

President.—How do you make the purchases of all your raw materials?

Mr. Ghosal.—We call for tenders and accept the best or the lowest tender.

President.—What are your principal raw materials?

Mr. Ghosal.—Mohwa and Molasses.

President.—You use molasses for rum?

Mr. Ghosal.—We call every spirit that is manufactured country liquor.

President.—Is there any complaint about the quality of the liquor by the section of the public that drinks?

Mr. Ghosal.—Yes. They would like the liquor distilled direct to issue strengths, i.e., 30, 40 and 60° U. P. instead of over-proof spirit being reduced by the addition of water to issue strengths.

President.—The public don't insist upon your seasoning the liquor; they don't mind taking it as you can give it?

Mr. Ghosal.—They would prefer the liquor with all its impurities. They object to the highly purified liquor, just as one objects to distilled water for a drink. They often complain that the taste is not so good.

President.—Take Bombay proper for instance. How many shops do you have in the town of Bombay?

Mr. Ghosal.—On the whole about 235.

President.—What is the area of the town of Bombay?

Mr. Ghosal.—About 22 square miles.

President.—And the population?

Mr. Ghosal.—11 to 12 lakhs.

Mr. Mathias.—Under the contract supply system, which you say is now almost past history, what were your methods for collecting the duty from the wholesaler?

Mr. Ghosal.—We did not collect anything from him; he simply supplied all that we required to our warehouses.

Mr. Mathias.—I am not speaking of the contractor. You had wholesale liquor suppliers under the contract system, had you not?

Mr. Ghosal.—No. All that I meant was that liquor instead of being manufactured by Government was distilled by the contractor and then the rest of the procedure was exactly the same. A licensee came to the warehouse, paid the duty and took away the liquor.

President.—Have you abolished the excise duty because it would be included in your price or do you still have the excise duty?

Mr. Ghosal.—What excise duty?

President.—Excise duty per gallon. Formerly you had that, didn't you? Private distilleries had to pay so much excise duty on liquor manufactured or removed.

Mr. Ghosal.—You are alluding to the monopoly system which was in vogue years ago. That meant that one contractor was given the right of manufacture, sale and everything.

Dr. Matthai.—How does it work in regard to the private distillery?

Mr. Ghosal.—The distillery only manufactures for us and supplies any quantity we want at our warehouse.

Dr. Matthai.—At what price?

Mr. Ghosal.—Rs. 1-5-0.

Dr. Matthai.—How is that determined? Is it cost *plus* duty?

Mr. Ghosal.—Only cost, this does not include duty.

President.—Do you include the duty in your selling price?

Mr. Ghosal.—The licensee has to pay to Government the cost price *plus* duty. He can then sell at any price he likes.

President.—That is for Dabhoda?

Mr. Ghosal.—Everywhere.

Mr. Mathias.—Do you have any system of the sort which is in force in some provinces under which the purchaser who wishes to take liquor out of the warehouse—pays into the treasury the excise duty; he also pays in the cost price of the liquor. There is a separate account for each. Having paid that in he gets a voucher on which he is able to obtain the liquor from the warehouse. On the other hand the contract supplier gets at the end of a specified period the cost price of the liquor. Is that your system?

Mr. Ghosal.—The system as regards the licensee is the same but as regards the contractor he simply supplies whatever is required at the warehouse. He has nothing to do with the licensee.

President.—That is Government warehouse?

Mr. Ghosal.—Yes. Government purchases whatever it thinks necessary from the contractor.

President.—To-day what happens is that so far as your distilling department is concerned it simply supplies to Government in its excise department liquor at Rs. 1-5-0 or Re 1 whatever the price may be.

Mr. Ghosal.—Yes. This is roughly the procedure so far as the one distillery given out under contract is concerned.

President.—Are there two separate departments, one for manufacturing?

Mr. Ghosal.—No, it is all the same department, as far as supply from Government distilleries is concerned.

President.—But the warehouse must be another sub-department of the excise?

Mr. Ghosal.—There is no separate distillery department; the distillery staff is under me, I send any officer I like there.

President.—But the warehouse must be a sub-department?

Mr. Ghosal.—The warehouse has got its own warehouse officer. Each warehouse may be looked upon as attached to the parent distillery.

President.—When a shopkeeper wants liquor he goes to whom?

Mr. Ghosal.—He applies first of all to the treasury officer; If the licensee wants 50 gallons, the treasury officer tells him how much is the cost or issue price and how much the still-head duty and what the total comes to.

Mr. Mathias.—Does he pay separately? Is there a separate record kept in the treasury of the excise and the cost price?

Mr. Ghosal.—Yes. The Excise Department however does not collect any money. Every pie of money is collected through the treasury by the Revenue Department. Separate account is kept of the cost price and the duty which is credited direct to Excise Revenue.

Mr. Mathias.—How does the contractor get paid?

Mr. Ghosal.—The contractor of the contract distillery has to submit his bill and I have to countersign it.

Mr. Mathias.—He sends a bill only once a month? What is the procedure?

Mr. Ghosal.—Yes, monthly. It comes to me, I countersign it and send it on.

Mr. Mathias.—That is checked in the treasury against the cost price received and in the warehouse against the quantity received there?

Mr. Ghosal.—It is checked in the warehouse only against the quantity received there.

President.—What is the revenue from country liquor in this Presidency?

Mr. Ghosal.—Rs. 2,11-26 lakhs.

President.—Is that gross revenue?

Mr. Ghosal.—Yes.

President.—From that you have got to deduct the cost of manufacture?

Mr. Ghosal.—No. This represents revenue from duty and license fees. The cost of manufacture and the cost price received from licensees are all accounted for separately under Government Commercial Undertakings, and the nett profit under that head is shown in the gross revenue.

President.—How many gallons does that represent?

Mr. Ghosal.—Roughly 13 lakhs gallons.

Mr. Mathias.—Have you received any complaints from dealers in liquor as regards delay when they wish to obtain their supplies?

Mr. Ghosal.—No. There is plenty of reserve everywhere.

Mr. Mathias.—Is it not cumbrous work?

Mr. Ghosal.—No.

Mr. Mathias.—They have first of all to go to the treasury, pay in their money and then obtain their challan and then present the challan at the warehouse before they can obtain their liquor? Are there any complaints?

Mr. Ghosal.—No. It has been the recognized practice for years and they are used to it.

Mr. Mathias.—Is it not complained that this is cumbrous and unbusiness-like?

Mr. Ghosal.—No complaints have been made.

President.—I take it, from the warehouse to the shops they have to make their own arrangements as regards transport?

Mr. Ghosal.—Yes.

Dr. Matthai.—The right of retail sale is licensed too?

Mr. Ghosal.—Yes.

Dr. Matthai.—Licensed on an auction basis?

Mr. Ghosal.—Yes, general auction.

President.—What about the price? Can the shopkeeper sell at any price he likes?

Mr. Ghosal.—He can charge anything he likes.

Mr. Mathias.—You had a system of direct licence without auction at one time?

Mr. Ghosal.—In the olden days it was mostly fixed fees.

Mr. Mathias.—Am I right in thinking that in the old days you had an auction system and you went to the fixed fee system and then you came back to the auction system again?

Mr. Ghosal.—From the very beginning there was a fixed fee system, as far as I know.

Mr. Mathias.—When was the auction system introduced?

Mr. Ghosal.—In 1917-18.

President.—That applies to all the shops?

Mr. Ghosal.—Yes, to every kind of shop. On the border shops till recently there was fixed price. That also is now being abolished.

President.—Have you come across any cases in which liquor shopkeepers have combined to keep down prices?

Mr. Ghosal.—Yes.

President.—Does it often happen?

Mr. Ghosal.—More often perhaps than suspected.

Mr. Mathias.—The auctions are conducted at the district headquarters, are they not?

Mr. Ghosal.—Yes.

Mr. Mathias.—Do you get reports from Collectors regarding them?

Mr. Ghosal.—Yes.

Mr. Mathias.—Have there been any complaints from Collectors about combination amongst the dealers?

Mr. Ghosal.—Several times. If there is a combine to his knowledge he does not confirm the sale.

President.—I don't understand this double system of having the cost price of the liquor combined with the duty?

Mr. Ghosal.—The duty varies in each district. Often it varies in different talukas in each district. The cost price or issue price is more constant.

President.—What is the idea?

Mr. Ghosal.—The duty depends partly on the capacity of the people to buy, the nature of the country, facilities for illicit distillation, and many other considerations. The issue price however depends on cost of manufacture *plus* cost of transport.

President.—I suppose the highest duty is in Bombay?

Mr. Ghosal.—Yes, Rs. 7-12-0 for 40 under proof, and Rs. 5 for 60° under proof.

Arrangements with Indian States.

President.—What is the arrangement now between the British Government and the outlying States, for instance?

Mr. Ghosal.—Some States have leased their Excise rights to us. Some others have agreed to certain mutual conditions.

President.—You have a sort of excise barrier between the British territory and the States?

Mr. Ghosal.—No. The general understanding with States which have not leased their abkari rights to us is that there should be a neutral zone within three or four miles of the border and there should not be any shops in that zone. Then there are some mutual agreements as to strengths, selling prices, etc. There is however no uniformity.

President.—Could any man bring any liquor from an Indian State into the British territory?

Mr. Ghosal.—No.

President.—It is not allowed at all?

Mr. Ghosal.—No.

Mr. Mathias.—You have to have a special detective staff?

Mr. Ghosal.—All our excise staff is actually preventive staff.

Mr. Mathias.—And you have a neutral zone?

Mr. Ghosal.—Not always, but there are in some places.

Mr. Mathias.—That is to facilitate the detection of smuggling?

Mr. Ghosal.—Not only that; it is more or less to prevent people from one border going across the border to buy liquor. It is to keep one's revenue to one-self.

President.—There is no arrangement as regards the fixing of retail prices between you and the States, is there?

Mr. Ghosal.—There used to be when our border shops were given on fixed fees with the condition of selling at a fixed price, but now all our border shops are auctioned, without any restriction as to selling prices.

Mr. Mathias.—You supply liquor to the Indian States; you possibly supply liquor to the bigger States at the cost price?

Mr. Ghosal.—We supply to those States whose excise administration is leased to us and to one or two other States.

Mr. Mathias.—Have they got their own distilleries?

Mr. Ghosal.—Yes, those which have not leased their excise administration to us.

President.—I don't understand about leasing. Do the Indian States surrender their rights to the British Government?

Mr. Ghosal.—We are so to speak the agents of the States as regards the abkari administration; we manage it for them and hand over every pie of revenue realized therein to them.

President.—Are there many of these States?

Mr. Ghosal.—Yes, a large number.

President.—That is simply to prevent smuggling I suppose, to stabilize the price as they call it?

Mr. Ghosal.—Yes, partly. The main object is the assimilation of the administration.

President.—You keep separate account for each State and say so much has been sold here?

Mr. Ghosal.—Yes. We enter into a sort of treaty for ten years and keep separate accounts.

President.—Do they fix the selling price or do you fix it?

Mr. Ghosal.—There is no fixed selling price as the shop keepers can sell at any price. The system in force in these State shops is the same as in British shops.

President.—You simply charge them the cost of the liquor?

Mr. Ghosal.—Yes. The duty, license fees, etc., are handed back to them. In fact we go to the extent of not charging them for the excise staff employed in their territory.

President.—Can you give me some sort of idea as to the cost of preventive staff in proportion to the gross income?

Mr. Ghosal.—5½ per cent.

Mr. Mathias.—That is the preventive staff not including your warehouse establishment?

Mr. Ghosal.—Everything.

Mr. Mathias.—The whole of the excise department?

Mr. Ghosal.—Yes.

Mr. Mathias.—What is the income from excise in the Bombay Presidency?

Mr. Ghosal.—Rs. 3,20·65 lakhs.

Mr. Mathias.—Is that gross revenue.

Mr. Ghosal.—Yes.

President.—And Rs. 15 lakhs is the cost of establishment roughly?

Mr. Ghosal.—Rs. 18,49,500.

Dr. Matthai.—Have you any idea how that proportion compares with other provinces?

Mr. Ghosal.—Fairly favourably, I think.

Dr. Matthai.—5½ per cent. as the cost of collection is considered reasonable?

Mr. Ghosal.—It is not the cost of collection; it is the preventive staff.

Dr. Matthai.—It is cost of administration?

Mr. Ghosal.—Yes, but a little explanation is necessary. Supposing there was total prohibition and the revenue from excise was nil, the cost of staff would be greater, because it is preventive staff, not the collecting staff. It is certainly not for collecting revenue. The revenue is all collected by the Revenue Department. It is partly for ensuring the collection it is true.

Mr. Mathias.—Does this 5½ per cent. include cost price of opium?

Mr. Ghosal.—No.

President.—Does this 5½ per cent. represent staff only or does it represent the whole expenditure?

Mr. Ghosal.—Only the staff.

President.—What is the unit of the excise detective department; do you have a district or a taluk?

Mr. Ghosal.—That varies; it depends on the amount of work in each charge. For instance there is the Commissioner, then there are the Superintendents. Each Superintendent sometimes has one district, sometimes three. In each district there are about 10 talukas and there might be a separate Inspector or Sub-Inspector for each taluka, or several talukas may be under one Inspector and so on.

President.—It depends on the amount of work in each district?

Mr. Ghosal.—Yes, or in each taluka or circle.

Mr. Mathias.—I think you use, to some extent, the police force?

Mr. Ghosal.—No, we only call on them for assistance if required in special cases.

Mr. Mathias.—Can you utilize the police force for your purposes?

Mr. Ghosal.—When we find our force is inadequate and we expect any trouble we requisition their services.

President.—Is an offence excise cognizable by the police also, or only by your department?

Mr. Ghosal.—Legally, the police can take cognizance, but in practice only the Excise Department takes cognizance except when such an officer is not within a reasonable distance.

Mr. Mathias.—Don't you get reports also from the police from time to time about smuggling?

Mr. Ghosal.—I don't think so.

Mr. Mathias.—Surely you have in your department a lot of contingent expenditure by way of rewards to police for detection of cases?

Mr. Ghosal.—I suppose in a year there are two or three cases where police have been called on to help and when rewards are given.

Mr. Mathias.—There is no considerable amount spent on rewards to police?

Mr. Ghosal.—No.

Mr. Mathias.—So that practically one may say that the whole of the detective work here is carried on by the Excise department without any assistance?

Mr. Ghosal.—Yes.

Mr. Mathias.—That would naturally make your expenditure on staff higher than that in a province where they depend on the police?

Mr. Ghosal.—Yes.

President.—Do you have many offences against the excise law of the Presidency?

Mr. Ghosal.—Yes, about 6,000 cases a year; it is steadily going up. As a matter of fact if we were detecting one case out of 10 in the old days we are probably detecting now one case out of 30. People are getting much more clever in evading detection.

President.—I suppose toddy is also excisable; that comes under country liquor?

Mr. Ghosal.—No. It comes under liquor.

President.—You have got the same staff for both?

Mr. Ghosal.—Yes.

President.—That must involve a good deal of work for the staff?

Mr. Ghosal.—The strength of the staff is according to the amount of work.

President.—You simply take a tree tax?

Mr. Ghosal.—Yes, and in addition obtain vend fees by auctioning shops and booths.

Dr. Matthai.—That is to say the tree tax is a fixed tax and the retail fee varies?

Mr. Ghosal.—Yes.

President.—What is the total strength of the staff?

Mr. Ghosal.—10 Superintendents; 103 Inspectors; 61 Assistant Inspectors; 151 Sub-Inspectors; 130 Clerks; 1,941 menials, jamadars, peons, etc.

Mr. Mathias.—The staff of Sub-Inspectors is comparatively small, is it not?

Mr. Ghosal.—The distribution of posts between Inspectors, Assistant and Sub-Inspectors has been regulated by a fixed percentage.

President.—Do you find the staff adequate?

Mr. Ghosal.—By no means.

President.—Supposing it becomes necessary to throw some extra work on you, we want to know whether you could do that with your present staff?

Mr. Ghosal.—Whether the Commissioner and the higher supervising staff may take on some extra work without further assistance, depends on the amount of extra work. As regards the subordinate staff however it is quite different: for that particular work we can have a separate extra staff. For instance we have got a separate staff for every bonded warehouse.

President.—So much about country liquor. What is the next excisable article?

Toddy.

Mr. Ghosal.—Toddy.

President.—As regards toddy do you follow more or less the same system except that you don't have a warehouse?

Mr. Ghosal.—Every toddy shop or booth is licensed. The right to vend is generally auctioned. A certain number of trees are allotted to each shop. A tree tax has to be paid for every tree that is tapped. No tree can be tapped till the fee is paid and the tree is marked. When a tree is tapped, the produce or the toddy has to be taken direct to the shop by the licensee's agents.

Dr. Matthai.—It is not a Government monopoly; toddy is licensed manufacture?

Mr. Ghosal.—It is a Government monopoly in this sense that the power of licensing the tapping of a tree vests in Government only.

Mr. Mathias.—After all the right of retail sale is the same as in the case of liquor. The shops are auctioned in the same way as country liquor shops?

Mr. Ghosal.—Yes.

Foreign liquor.

President.—I think you have also got foreign liquor excise?

Mr. Ghosal.—Yes.

President.—I take it the whole of this abkari revenue is provincial?

Mr. Ghosal.—Yes, except the import duty on liquors imported from abroad which is central and goes to the Government of India.

President.—But even as regards foreign liquor the Central revenue only take the duty, they don't take the profits of the license?

Mr. Ghosal.—License fee and everything else comes to us.

President.—There also do you have the auction system?

Mr. Ghosal.—No. Foreign liquors have so far been disposed of under fixed fees except in the case of some shops in the Bombay City.

Mr. Mathias.—Do you have a system of fee per gallon?

Mr. Ghosal.—We have variable fixed fees according to the amount of transactions.

Mr. Mathias.—Is it so much a gallon?

Mr. Ghosal.—No. The fees are according to a scale which is based on the volume of sales.

President.—In that case I take it the wholesale dealers supply the foreign liquor to the shops?

Mr. Ghosal.—Yes, but at present the definition of "wholesale" is rather misleading. The whole system is going to be reorganized from the 1st April 1928. Now the definition of wholesale is selling to anyone not less than a case. For instance if I buy privately two cases of whisky, that is "wholesale". If a tradesman buys in quantities less than a case he is buying in "retail".

Mr. Mathias.—Do you distinguish between the wholesaler and the retailer?

Mr. Ghosal.—There is no real distinction as explained above and that is why a change has been proposed.

Mr. Mathias.—Is it the same license fee system?

Mr. Ghosal.—Yes.

President.—There are three things: the wholesaler sells by the case. Then there is also the shopkeeper who sells bottles only.

Mr. Ghosal.—The retail man can sell in any quantity he likes.

President.—You cannot have a drink in every shop?

Mr. Ghosal.—No. Only in such licensed premises as refreshment bars, hotels, dak bungalows, "on" shops, "off" shops, etc.

President.—Each class of shop, I take it, is auctioned? Is it licensed?

Mr. Ghosal.—Only "on" shops in the Bombay City are auctioned. All shops are licensed of course.

President.—What is that?

Mr. Ghosal.—"On" shops are shops in the Bombay City only where you can go and have a drink without refreshment.

President.—It is like a bar?

Mr. Ghosal.—Yes.

President.—Those are auctioned?

Mr. Ghosal.—Yes.

President.—Under this system you are practically dividing the income from foreign liquor between Central and Provincial?

Mr. Ghosal.—Yes.

President.—I take it that this applies to all the provinces?

Mr. Ghosal.—Presumably.

Dr. Matthai.—Is foreign liquor manufactured in Bombay?

Mr. Ghosal.—There is no manufacture in Bombay City. In Baroda which is within the geographical limits of this Presidency, there is a certain amount of liquor manufactured which is called Indian made foreign liquor for instance synthetic whisky, also Rectified spirits. Rum is regarded as Indian made foreign liquor. The definition of foreign liquor is left entirely to the discretion of Government.

Mr. Mathias.—A fee gallon system is in force in certain other provinces—so much per gallon—the license fee being calculated according to the sales.

Mr. Ghosal.—I am not aware of the details.

President.—Take Beer, for instance. That is manufactured in India. Is it classed as foreign liquor?

Mr. Ghosal.—It is classed as foreign liquor.

President.—Then it has nothing to do with the country of origin apparently?

Mr. Ghosal.—No. Many Indian products are classed as foreign liquor. Rum for instance; we call it Indian made foreign liquor.

Mr. Mathias.—The license fee on that foreign liquor is credited to the provincial Government?

Mr. Ghosal.—Yes.

Dr. Matthai.—How do the license fees that you calculate on rum, beer and so on in Bombay compare with the fees on imported foreign liquor?

Mr. Ghosal.—Most foreign liquor shops sell both European and Indian made foreign liquor, and so comparison is not possible.

Dr. Matthai.—Is there any kind of data that you have about the revenue collected in Bombay on foreign liquor manufactured in Bombay?

Mr. Ghosal.—In Bombay there is no manufacture.

Mr. Mathias.—You get from Shajehanpore, Cawnpore and so on?

Mr. Ghosal.—Beer comes from Bangalore and a certain amount of synthetic whisky and brandy come from the Alembic Chemical Works, Baroda.

President.—There is no manufacture done in Bombay?

Mr. Ghosal.—No. We have got a warehouse in Bombay for the purpose of compounding, reducing, blending and bottling.

President.—What is the amount of revenue that the provincial Government gets from the sale of these licences of foreign liquor shops? That is the only form of revenue so far as foreign liquor shops are concerned, isn't it?

Mr. Ghosal.—Rs. 18·82 lakhs. It is practically all license fee.

President.—The duty is Rs. 17·8·0 per gallon?

Mr. Ghosal.—That is for Indian made foreign liquor and for imported foreign liquor it is Rs. 21·14·0.

President.—So that there is some protection there?

Mr. Ghosal.—Yes, that was the idea.

President.—Is the sale of Indian made foreign liquor decreasing?

Mr. Ghosal.—No. It is increasing since the duty was reduced. The high price of country liquor is also a contributory cause.

Mr. Mathias.—You have increased the duty on country liquor?

Mr. Ghosal.—No. Rationing and auctioning combined have put up the prices. With increased bids at the auctions the selling price also increases.

Mr. Mathias.—A certain section of the community prefers country made foreign liquor to country made liquor?

Mr. Ghosal.—Yes.

President.—The next excisable article is salt, is it not?

Mr. Ghosal.—I have nothing to do with Salt.

Opium.

President.—Do you administer opium?

Mr. Ghosal.—Yes. We get the whole quantity of opium from Ghazipore.

President.—From the Government of India?

Mr. Ghosal.—Yes.

President.—Then of course it may be regarded as a monopoly of manufacture?

Mr. Ghosal.—It is. The only State which is allowed to manufacture is Baroda; all the other States are supplied by Government. They get remission of the whole or a certain proportion of the duty.

President.—Take Bombay: excluding Baroda there are a number of Indian States, Mahi Kantha and so on. What I want to understand is this. Do you supply opium to all those Indian States direct or do you sell opium in those Indian States on their behalf?

Mr. Ghosal.—We supply whatever they require.

President.—They take the profit direct? They can sell it as they like within their own territory?

Mr. Ghosal.—Yes.

President.—So that what it comes to is this. The Indian States are practically entitled to whatever they can get out of the sale of opium?

Mr. Ghosal.—Yes, but there are certain agreements as regards price.

President.—The revenue from opium is entirely Central?

Mr. Ghosal.—It is entirely provincial. For what is supplied from Ghazipore we are supposed to pay the cost price which is Rs. 26.

President.—My recollection is that the Government of India made some profits but I am not sure.

Mr. Ghosal.—We paid Rs. 11½ lakhs for opium from Ghazipore. The Government of India are supposed to charge only the cost price.

President.—What revenue did the provincial Government make out of this?

Mr. Ghosal.—Rs. 13 lakhs, as gain on issues to licensees, including duty.

President.—Is that nett or do you have to deduct Rs. 11½ lakhs from Rs. 13 lakhs?

Mr. Ghosal.—No. It is nett. Apart from this there was a revenue of about Rs. 8 lakhs from license fees.

Mr. Mathias.—You pay the cost price of Rs. 26 *plus* Rs. 10 duty?

Mr. Ghosal.—No, only Rs. 26 cost price. The Indian States have to pay also the duty, but get refunds in various proportions.

President.—That is very curious, you say they get it refunded?

Mr. Ghosal.—The duty is refunded in various proportions. To give you some idea, Baroda has its own opium: Cambay, Palanpur and the States in Mahi Kantha and Rewa Kantha get full remission of the duty, Cutch and Kathiawar get remission of ¼rd, Satara Jaghirdars get 1/10th and the other States get 1/5th.

President.—What is the idea?

Mr. Ghosal.—I have been trying to trace it but I cannot. It probably depends on the fact whether before the Government of India took over the monopoly these States had any facilities for, or whether they were actually cultivating opium themselves, and so on. I think these were the considerations that were taken into account.

President.—Possibly some historical reasons. Is there any question of revising this method?

Mr. Ghosal.—I have not heard of any.

President.—I take it you auction the opium shops, do you?

Mr. Ghosal.—Yes.

President.—Each shop is separately auctioned?

Mr. Ghosal.—Yes, except certain border shops which are given on fixed fees, to avoid rise in prices.

President.—I take it that the same staff looks after opium, or do you have a separate opium staff?

Mr. Ghosal.—The same staff.

President.—The salt administration is entirely independent of you?

Mr. Ghosal.—Yes, entirely.

President.—I have some recollection that in the olden days opium salt and abkari were all in one department.

Mr. Ghosal.—In the olden days the Commissioner of Excise had opium, salt, abkari and customs also.

President.—Then the other excisable article is hemp drug. The manufacture of that also is undertaken by Government?

Mr. Ghosal.—Yes. Ganja is manufactured in the Bombay Presidency; bhang comes from Hoshiarpur.

Mr. Mathias.—Do you grow hemp here?

Mr. Ghosal.—Generally here we have selected a small area in one district where we give a license to certain persons to cultivate it under supervision and that is brought to our threshing floor under supervision and manufactured, and is then taken straight from there to our warehouse.

President.—Is there a factory for making ganja?

Mr. Ghosal.—We don't require a factory; we only require a place for threshing, pressing and drying.

President.—Hemp is grown under Government supervision?

Mr. Ghosal.—Yes.

President.—You have your inspectors?

Mr. Ghosal.—Inspectors and peons.

President.—Is it on a large scale?

Mr. Ghosal.—It is only when the ganja is maturing that we have an extra staff for a couple of months—1 Inspector, 2 or 3 Sub-Inspectors, and 30 or 40 men are enough to look after that.

President.—What about bhang?

Mr. Ghosal.—It comes from Hoshiarpur.

President.—Who supplies it?

Mr. Ghosal.—It comes from the Government depot.

President.—Are these licenses also auctioned in the case of ganja and bhang?

Mr. Ghosal.—Yes.

Dr. Matthai.—Is the cultivation done in small holdings?

Mr. Ghosal.—Yes, but we have to select adjacent fields and also such as are not likely to fail in their yield. Last year we had 250 acres. This was all in one block to ensure proper supervision.

President.—Does the land belong to Government?

Mr. Ghosal.—It is private land. There is a great demand for permission to cultivate ganja.

Mr. Mathias.—How do you fix the price?

Mr. Ghosal.—The Commissioner of Excise generally fixes it on the cost of cultivation and other factors also are taken into account.

Cotton excise duty.

President.—Mr. Brander, you were in charge of cotton excise duty before?

Mr. Brander.—Yes.

President.—The excise duty, when it was abolished, was 3½ per cent.

Mr. Brander.—Yes.

President.—What was generally the system for collecting the excise duty?

Mr. Brander.—The mills sent in returns of cotton goods issued during the previous month and my office staff would calculate the duty upon that and send them another form saying "you have to pay so much", and then they paid that by means of cheques usually. At the same time we had an inspector—Mr. Hallows was the last man—who went round all these mills checking their books, gate passes and things of that sort. It was a very simple system.

President.—How many mills did you have?

Mr. Hallows.—150 altogether for the whole Presidency.

President.—How many in Bombay?

Mr. Hallows.—About 75 in Bombay, 55 in Ahmedabad and the remainder spread over the rest of the Presidency.

President.—I take it that the form of returns was prescribed by the Government of India.

Mr. Brander.—Yes, it was in the rules.

President.—Have you any special knowledge of the textile manufacture, Mr. Hallows?

Mr. Hallows.—Yes, I had been brought out specially for this.

President.—Had the books to be kept in any particular form?

Mr. Hallows.—Yes. They had to show day to day everything they manufactured and serial numbers were given and as they were issued they had to mark the date so that you could see what was produced, what was delivered through the gates and the balance at the end of each month.

President.—Did you have any locks or anything on the mills or what?

Mr. Hallows.—No.

President.—They could remove the goods at any time by simply making entries in the books.

Mr. Hallows.—The chief point was that they should have a gate pass.

President.—Who gave the gate pass?

Mr. Hallows.—The mill people themselves.—The clerks made out the gate passes. They had all sepoys at the gates. The system had been in force for so many years that the sepoys seemed to watch the gate passes for Government as well as for mill managers. They would not allow goods to pass without gate passes.

Dr. Matthai.—Do you mean the sepoys employed by the mills?

Mr. Hallows.—Yes.

President.—Did the mills have to make any contribution towards the staff?

Mr. Brander.—It was covered by the duty.

President.—You did not have any difficulty in detecting any cases where evasion was tried? Did you come across any cases where there was any difficulty?

Mr. Hallows.—During the first few months I had some difficulty where different qualities of cloths were concerned. After that everything seemed to be fairly straightforward.

President.— $3\frac{1}{2}$ per cent. *ad valorem* meant that somebody had to value the goods.

Mr. Hallows.—Every year we used to get the market rates for different kinds of cloth—long cloth, etc.—and we used to form the idea of the present market rates, and afterwards the duty was enforced. A circular was sent round to all the wholesalers and then we worked on those rates.

Mr. Brander.—The tariff valuation was done once a year.

President.—It was fixed by the Government of India, was it?

Mr. Brander.—Yes, in discussion with the millowners.

President.—The same as you have in the Customs.

Mr. Brander.—Something like that.

President.—Was there any article on which there was any specific duty or was it all $3\frac{1}{2}$ per cent. *ad valorem*?

Mr. Brander.—Generally all $3\frac{1}{2}$ per cent. Some of them had to be treated as *ad valorem* but most of them were grouped under various headings. They were all put down here (handed in).

President.—Then as regards exports, did you have to give any certificate for exports?

Mr. Hallows.—They used to get a rebate on export. Before goods left the mill, they had to be stamped. They had to fill up some form and send it to the Collector's office; and I used to go there and see to the stamping and then later on they got the rebate.

President.—But in every case they had to pay in the first instance the excise duty and claim the rebate afterwards.

Mr. Hallows.—Yes.

President.—You did not allow any direct export.

Mr. Brander.—That was export by land and not by sea.

Mr. Redkar.—The exemption was given by deduction of the goods exported from the return if the goods were exported before assessment and drawback of the full duty was allowed when the goods were exported after assessment.

Mr. Brander.—As regards exports by sea, the Collector of Customs sent a certificate on to us.

President.—Who refunded the duty?

Mr. Brander.—We did it, on getting a certificate from the Collector of Customs that so much had been exported.

Mr. Mathias.—There were a number of cotton mills in the Native States.

Mr. Brander.—Yes.

Mr. Mathias.—Was there any complaint about competition from the mills in the Indian States because there was no excise duty in the Indian States?

Mr. Brander.—I don't remember any dispute occurring. Some of the millowners own mills in the Indian States.

Mr. Redkar.—The arrangement was that they should impose the duty in the States. On goods exported from Cambay to any British territory, the duty was not exempted.

President.—What were the rights of the Indian States as regards export from Indian States into British territory? Was the excise duty leviable or was the import duty leviable?

Mr. Redkar.—They had their own Excise Acts in the Indian States. There was practically no export from those States.

Dr. Matthai.—The excise varied according to the rate here?

Mr. Redkar.—Yes.

Mr. Brander.—According to the Act, you can levy the inland Customs duty upon cotton goods passing into British India out of any territory declared to be a foreign territory.

President.—Was it in fact levied so far as this Presidency was concerned?

Mr. Brander.—No. The practice was that the Indian States imposed the same duty as we did.

Dr. Matthai.—Was there any complaint by millowners here that textile goods produced in Indian States on which no excise duty was levied were sold in British India?

Mr. Redkar.—At the time the Act imposing this duty was passed; some discussion took place about the difficulty in Indian States, but since they had their own Acts they levied the same duty.

Dr. Matthai.—To your knowledge, there was no complaint.

Mr. Redkar.—No.

President.—It was more than a question of levying the excise duty because any Indian State for instance might import foreign goods and there might be no duty on them. They might levy only 3½ per cent. excise duty and still pass those goods into British territory and those goods can undersell foreign goods in British territory. Did such a thing happen?

Mr. Redkar.—Not to our knowledge.

President.—So far as your department was concerned, you had no complaint from people in British territory that goods either imported into or manufactured in Indian States were imported into British territory.

Mr. Hallows.—No.

Mr. Redkar.—There was only once some complaint about a small factory, not worth taking into consideration. Otherwise there was no complaint.

Mr. Brander.—The difference was so small. There was an anonymous letter from somebody; that was all.

President.—Which department would be in charge of preventing the smuggling?

Mr. Brander.—The Customs Department—not we.

President.—Both as regards excise and Customs, supposing it was a question of merely levying an excise duty in Indian States and supposing no excise duty was levied and goods were being brought into British territory, would you be in charge of it or the Customs?

Mr. Brander.—I would probably have to move the Customs Department in the matter but they would have actually done the collection at the frontier.

President.—Would they collect the excise duty or the Customs duty?

Mr. Brander.—It would be Customs duty equivalent to excise duty, I think. The Customs duties should be at the rates for the time being prescribed in the Indian Tariff Act, 1904, on goods passing into British territory.

President.—That would be the Customs Act.

Mr. Brander.—Yes, it would certainly be not less than $3\frac{1}{2}$ per cent., but it might be more.

President.—Mr. Hallows, did you have any big staff to assist you or did you find time to inspect the books of all the 150 mills yourself?

Mr. Hallows.—I used to go round about once in six weeks and sometimes I had two Accountants or a clerk with me.

Dr. Matthai.—You mean you were able to inspect each of these 150 mills once in six weeks.

Mr. Hallows.—Yes.

President.—What sort of checks did you apply to find out whether the books were properly kept?

Mr. Hallows.—The whole system was prescribed by Government. Different books had to be kept and I had to see whether the returns tallied with everything that was delivered by the mills. There were lakhs of pounds in some cases, and it was impossible for me to check each and every item. I used to pick out different items and just check the total amount delivered through the gate passes.

President.—The excise duty was practically on the manufacture.

Mr. Hallows.—Yes.

President.—Would you be able to say, supposing they had 100 bales of cotton (and different mills might turn out different quantities from the same quantity of cotton), whether that particular output was correct as regards each individual mill?

Mr. Hallows.—Yes. You can have a very good idea of it. You have a good idea of the loss on the cotton. From the raw cotton up to the manufacture of goods, the loss would come to about 16 to 20 per cent.

President.—Did you deduct it?

Mr. Hallows.—Yes. I used to check the yarn report, the yarn produced and the cloth produced and also the amount of size in the cloth. This was my method of checking. I took the total amount of yarn consumed, less the wastage, and the cloth *plus* the size and these would cover the total amount. Comparing one month's production with another, one could form a very good idea as to whether everything was all right or not.

Mr. Brander.—There was one security about the cotton mills. You had the managing agents and the shareholders were keeping a watch and so there was not only the Government watch upon the outturn of mills but also the watch of the shareholders.

President.—There are some mills which are not limited liability companies.

Mr. Brander.—A great majority of the mills are run by a system of managing agents.

Mr. Redkar.—The system was that the agents' commission was fixed on production on the basis of weight. So it was in the interests of the mill agents to bring every pound that was produced to account in the books and moreover the processes of manufacture in the mills were such as to require the maintenance of working records. Both these circumstances and the fact that every issue out of the mill premises was supported by gate passes afforded ample means of testing the accuracy of the mills' returns.

President.—The whole question is whether you had the time to do it.

Mr. Hallows.—Yes.

Dr. Matthai.—Can you give me an approximate idea as to how many mills out of the 155 are managed otherwise than by managing agents, which are not limited liability companies?

Mr. Brander.—Their number is insignificant.

Dr. Matthai.—What is the smallest size of a mill?

Mr. Hallows.—12 looms; that would be insignificant, not worth considering. A moderate sized mill working on commercial lines would have 200 looms.

Dr. Matthai.—The average would be much above that.

Mr. Hallows.—Yes, the average would be 600 to 800 looms.

President.—This excise duty was levied on goods produced in mills, was it not?

Mr. Hallows.—Yes.

President.—And the handloom industry was excluded.

Mr. Hallows.—Yes.

President.—Was there any sort of sharp distinction between a mill and a small works where some of the processes were performed by hand?

Mr. Brander.—The hand process was not taxed; it was only the work done by machinery which was taxed.

Mr. Hallows.—In Surat there were hundreds of looms which were not taxed.

President.—I have seen 30 looms worked by hand for all practical purposes.

Mr. Hallows.—The production on hand looms is 7 yards per day whereas in the case of power looms it is much more, something like 60 yards.

Mr. Brander.—A mill is defined as any building or place where cotton goods are made by machinery, worked otherwise than by manual labour. Manual labour is excluded.

President.—You can employ 500 weavers in a place and manufacture on a fairly large scale in that way. Labour is very cheap on handlooms.

Mr. Hallows.—The cloth woven on handlooms is very difficult to manufacture on a power loom.

President.—How do you mean?

Mr. Hallows.—It is much finer. There are more threads per inch. If you attempt the same on a power loom, the threads would keep breaking down. Therefore you don't get really any competition between the two because there is a tremendous difference between the price of the hand made sari and the power made sari.

President.—What is the difference between the machine made and the hand made?

Mr. Hallows.—The production on a handloom would be about 7 yards per day whereas in the case of a power loom it would vary from 55 to 70 according to the efficiency of the mill.

President.—I am talking of the total production.

Mr. Hallows.—It would be only one eighth or one tenth.

Mr. Brander.—There are no statistics.

Mr. Mathias.—Mr. Hallows, you say that the handloom industry did not come into competition with the power driven industry.

Mr. Hallows.—No, it did not.

Mr. Mathias.—That was because the excise duty was as low as 3½ per cent. If the excise duty had been 50 per cent., then of course people would have taken to the handloom industry instead of the machine industry, would they not?

Mr. Hallows.—I don't think that even 50 per cent. would affect. They make a finer class of sari—something that may cost Rs. 20 or 30 whereas you make a similar thing in a mill for Rs. 6 or Rs. 7, so that you require a tremendously high duty to make the poor quality of cloth produced by a mill to compete with the hand made. As a matter of fact the cloth itself would not do.

Mr. Mathias.—The handloom industry has a specialised market.

Mr. Hallows.—That is really the point.

President.—It is for the superior article practically.

Mr. Hallows.—Yes.

President.—Whereas in the case of matches it is for the inferior article that hand labour is used.

Mr. Hallows.—In the case of matches they would have to purchase their splints from some of the larger factories.

Mr. Mathias.—Not necessarily?

Mr. Hallows.—Can they make these themselves?

President.—I suppose the machine made yarn is used in the handloom industry.

Mr. Hallows.—Practically always; hand spinning is very little.

President.—The line was drawn at the weaving stage.

Mr. Hallows.—At the power.

President.—Did it apply to any factory however small the power may be?

Mr. Hallows.—If they had power, they came under the Act, no matter what the number of looms was.

Dr. Matthai.—The power factory which employed less than 50 ply would not come under the Factory Act.

Mr. Hallows.—Even if you had a factory with 20 working people using power, it would come under the Act.

Mr. Mathias.—This system of collection of excise would be suitable only I take it for big factories.

Mr. Brander.—Of course you get more accurate account keeping in the bigger factory. But I don't see why it should not be applied to smaller ones too.

Mr. Mathias.—Take for example the match factories in Calcutta. There are a considerable number of factories in that city in which most of the processes are conducted by hand or only one or two processes are undertaken in a big room of a private house producing say anything from 10 to 50 gross a day. Those would be somewhat difficult to check, would they not?

Mr. Brander.—They would be because their accounts would be rather unreliable and unscientific.

Mr. Mathias.—Even if they were correct, they would be unscientific, and they would be kept in Bengalee.

Mr. Brander.—Yes.

Mr. Hallows.—A small concern like that won't have a clerk, and I had one or two small places in Surat, which, when I visited them, gave me much more trouble than the largest mill in Bombay. They did not pay a man to look after their books sufficiently well. He might be cheap for the money he received, but he did not know anything about book-keeping.

Dr. Matthai.—The kind of check you used over the cotton factories taking the amount of yarn and from that deducing the amount of ply, would be difficult to apply in the case of matches.

Mr. Hallows.—I don't think so.

Dr. Matthai.—If you take the amount of wood, the actual output varies with each small factory.

Mr. Hallows.—I believe on the Swedish wood or the Japanese wood they get a loss of about 25 per cent.

Dr. Matthai.—Take Indian wood.

Mr. Hallows.—40 or 50 per cent. it would be.

Dr. Matthai.—It depends on the sort of Indian wood.

Mr. Hallows.—If they kept an account of the wood they purchase either by tonnage or by measurement and the amount they consumed and the amount of matches produced monthly and showed their balance, as they did in the case of cotton, one could form a good idea that everything was all right.

Dr. Matthai.—Where a man runs a match factory entirely by hand and uses some kind of Indian wood, the difficulty of applying a standard proportion of that kind would be very, very great. You can in the case of a power driven textile factory take the amount of yarn and take the amount of output and apply a standard proportion. But in the case of a match factory producing matches and using a baser kind of Indian wood about which you have no statistics at all of waste, it would be exceedingly difficult.

Mr. Hallows.—Whatever wood we got, supposing one factory was using the two kinds of wood, both Indian and foreign of which the wastage in the one case would be 50 per cent. and in the other 25 per cent. he would keep his accounts separate.

Dr. Matthai.—The difficulty is this. The Indian wood is still in the experimental stage.

Mr. Hallows.—That is true.

Dr. Matthai.—Therefore before you apply any standard proportion you have to wait for some time before you get any reliable figures.

Mr. Hallows.—In my inspection in one case I found that the loss was about 40 per cent. That was some six months ago.

Dr. Matthai.—You have been to fairly large factories.

Mr. Hallows.—We have about 14 in Bombay.

Dr. Matthai.—Their output would not be more than 1,000 gross a day.

Mr. Hallows.—They are not very small. The smallest factory in the Bombay Presidency makes about 5 to 10 cases a day.

President.—There of course some system of accounting may be necessary. But there is one difference between cotton and matches and that is this. You cannot have a partially manufactured cloth in a handloom factory; you must start from yarn whatever you do and you must complete the process in the handloom industry. Whereas in the case of a match factory you can get the splints or you can get the veneer and you can get your boxes ready made or anything else you like separately manufactured.

Mr. Hallows.—You will have to commence with splints. It does not matter what kind of wood is used.

President.—You must have seen machines where they don't have any power at all for making splints or veneers. You have hand machines which peel the wood; you have had machine which chop the splints and you have also machines which give you the veneer for boxes and then you simply hand it to anybody who comes along and he makes the complete boxes. That you have not got in the cotton industry. You must complete all the processes.

Mr. Hallows.—Yes, he must complete the cloth.

President.—As a matter of fact we have seen factories where hardly any power is used at all. Practically the whole thing is done by hand. Could

we exclude matches made by hand in the same way as the cloth made by hand loom was excluded?

Mr. Hallows.—In Bombay we have got 14 factories to which it would be very simple to apply a similar Act as the Cotton Excise Duty Act. I think it would be a good idea to begin from splints. It would not matter to Government where they were collected. If they had these splints they were not going to waste any more than they could possibly help before making them into matches. You could exclude the different kinds of wood and you would simply work on the splints per day or per month. Then these would make so many boxes of matches and you get the total number of boxes they make. At the end of every month you could balance that and say "you are short of so many boxes according to the splints. Where are they?" They might have sold to a small number of people and they must produce them.

Mr. Mathias.—How do you estimate the amount of splints?

Mr. Hallows.—I should say by weight.

Dr. Matthai.—It is as difficult to measure the quantity of splints as to measure the output. What I mean is this. In the case of match factory where they do the whole process, viz., from the log end to the match end, what your suggestion amounts to is that in order to check the amount produced in that factory you use the amount of splints as a kind of check. That simply transfers the problem from one end to another.

Mr. Hallows.—No. The chief thing I take it that Government want to do with it is to see that if any duty is imposed, nothing is evaded. You want something to check the matches produced and I think the best thing is instead of going from the wood—as you say there is such a large amount of wastage—the nearest thing is to commence from splints or the veneer. You can also work it from the veneer but I think that splints would be better.

President.—Supposing hand loom was not excluded at all, you could not have checked the production.

Mr. Hallows.—We could have checked but we would have required a tremendous amount of staff to do it.

President.—What sort of check would you apply?

Mr. Hallows.—You would have to take into consideration the yarn purchased and of course there is very little waste, say 2 per cent. when it is manufactured by hand.

President.—In a small factory like that, you would not know how much yarn they had purchased.

Mr. Hallows.—He must keep some kind of accounts.

President.—It is not as if the shops selling yarn were licensed. Any man could go out and buy yarn and you would not know how much yarn he bought.

Mr. Hallows.—In the case of all these concerns, they all keep some kind of books in their own language to show what was going on.

President.—I have considerable amount of experience of these. The amount of book-keeping done by an average Indian trader or manufacturer, is very little indeed. Even in these big match factories here, none of them have been able to supply us with any cost sheets kept in the ordinary way.

Mr. Brander.—Surely all these small factories would be knocked out by well organised big factories. Is there any need to bother about them at all.

President.—You never know how long they would take to die.

Dr. Matthai.—In the case of the handloom industry, supposing we said that so many looms in a handloom factory could produce so much and simply fixed a flat rate in that way, would it be right?

Mr. Hallows.—You could do that, but it would not be quite correct.

Dr. Matthai.—Would it be risky?

Mr. Hallows.—Suppose a man had 10 looms and he only runs 5 looms for a week, it would not be fair to charge him on the 10. That is going to make the duty on production double what it ought to be. The more you produce the less percentage the duty works out to.

Dr. Matthai.—There is that risk too.

Mr. Mathias.—You suggested just now that you would start from splints and estimate the amount of matches turned out on a consideration of the amount of splints used. How would you check the amount of splints used?—the amount of splints actually used or lying in the factory? You say you would weigh them. But how are you going to check their record?

Mr. Hallows.—They would have to keep a record as they did in the case of cotton excise.

Mr. Mathias.—How do you know that it would be correct?

Mr. Hallows.—You can check month by month by the amount of wood purchased and the amount consumed.

Mr. Mathias.—You get back to the same difficulty. There are different outturns for different woods.

Mr. Hallows.—If you keep accounts for different qualities of wood—Indian wood so many thousand tons and foreign wood so many thousand tons consumed—you know the percentage of loss. You get a good idea of what the percentage of loss is. You get a regular system of splint manufacture. There is some responsible clerk in the factory who keeps an account of these splints and if you see one day how they are worked there and how many boxes they make, you can get a good idea and you can take it by the number. As regards weight, you get a variation in the weight of wood because I believe they work all this wood when it is damp. Naturally then it is heavy. Therefore you could check it by weight.

President.—Before you introduced the other system you had a contract system where you had a contractor who manufactured the liquor for Government. That manufacture was entirely in bond, was it not?

Mr. Ghosal.—It was all under supervision.

President.—You had a Government Inspector practically residing there on the premises and the factory was locked?

Mr. Ghosal.—Yes. Every bit of stuff coming in had to be accounted for.

President.—There was only one outlet and that was locked by the Inspector and opened when required?

Mr. Ghosal.—Yes. Nothing could be brought in or taken out without his permission.

Dr. Matthai.—Under the contract system, is the manufacture or the storing in bond?

Mr. Ghosal.—Even the manufacture is done under supervision.

President.—The warehousing is done inside the factory?

Mr. Ghosal.—Yes.

President.—Practically so far as the excise duty was concerned, Mr. Brander, although it was not manufactured in bond, it really amounted to that.

Mr. Brander.—It practically came to the same thing.

President.—Because you had the right of access at any time to the mills, to look at their books, to watch the processes and the rest of it. So that practically the manufacture was carried out under Government supervision to some extent.

Mr. Hallows.—Owing to the managing agency system! The small factories would go out. We had one case of a match factory at Satara which had disappeared. They ran for a year or two.

President.—As regards the prevention of smuggling of cloth, did you depend for it on the general Excise Department?

Mr. Brander.—From the Indian States?

President.—Yes.

Mr. Brander.—There was none because they levied the same duty as we did. So, we did not care.

President.—Supposing you had to use the preventive staff, would you have to depend on the general excise staff?

Mr. Brander.—On the Customs. There was one at Indore, one at Cambay and one at Baroda.

President.—What were the relations between you and the Government of India as regards the expenditure on the staff, Mr. Ghosal?

Mr. Ghosal.—We have nothing to do with the Government of India, as Excise now is entirely provincial. Formerly when some staff did joint duties, the cost was shared proportionately.

President.—Mr. Brander, the whole of this cotton excise duty went to the Government of India.

Mr. Brander.—Yes.

President.—At that time were you under the Excise Commissioner.

Mr. Brander.—I had nothing to do with the Commissioner of Excise.

President.—Were you an officer of the Government of India?

Mr. Brander.—I was an official of the provincial Government. The provincial Government acted as the agent. I don't think that anything was paid by the Government of India.

Mr. Mathias.—Did they receive a lump sum for the duties performed by the Local Government?

Mr. Brander.—The actual cost of establishment only.

President.—You kept a separate account on behalf of the Government of India.

Mr. Redkar.—Yes.

President.—Did you have to perform any other duty?

Mr. Redkar.—No.

President.—You had other duties, Mr. Brander?

Mr. Brander.—Yes, I had many other duties.

President.—This was really incidental, so far as you are concerned.

Mr. Brander.—Yes, it was merely routine work and so it worked smoothly.

Mr. Redkar.—The Inspector of Factories, and the Inspector of cotton Excise were combined at first and there was a certain proportion fixed for the distribution of that expenditure.

President.—The Factory Inspector is a provincial officer.

Mr. Redkar.—Yes. When the working of the Act was first started, the duties of the cotton excise and factories Inspectors were combined but since the last six or seven years they were separated and there were separate inspectors.

President.—Mr. Hallows, do you go and inspect the match factories?

Mr. Hallows.—I did up to 8 or 9 months ago and since then they have been handed over to my assistant except the one at Ambarnath.

President.—Are these factories licensed in any way?

Mr. Hallows.—I don't think so.

President.—They use some substances which may be described as explosives. Do you have any supervision as regards these at these match factories?

Mr. Hallows.—We take precautions, as far as the use of these is concerned with regard to open doors in case of fire to provide access and the burning of the refuse. They have a certain amount of wastage and they must take the wastage a certain distance from the factory and dump it in or bury it. These are the only precautions we take.

President.—Don't you think it necessary to license those factories because they are dangerous and may cause fire or explosion: As an Inspector of Factories, what is your opinion.

Mr. Hallows.—I should say that they ought to be licensed.

President.—There have been one or two cases of fire in Bombay.

Mr. Hallows.—Yes.

President.—One factory was almost burnt down.

Mr. Mathias.—Would you agree for example that one of the conditions of license should be that there must be open space for a certain number of yards round the factory?

Mr. Hallows.—Yes.

Match manufacture unsuitable as a cottage industry.

Dr. Matthai.—Would you consider the manufacture of matches a sound proposition for a cottage factory? I am looking at it this way. The kind of small factories what we have in Calcutta is like this. You get a man buying a few splints and veneers from some large factory. He takes them to his own house and then he prepares the chemicals in the house, dips the splints, gets his womenfolk to make the boxes and thus matches are produced. The main business apparently is the mixing of chemicals. He may do it in a place which may be next door to his kitchen. Do you consider that sort of industry a suitable industry?

Mr. Hallows.—Not at all.

President.—Many factories to-day get their boxes made in the homes of the workers and that practice may spread. Now as regards the employment of women and children in these factories, you see that in some of them, the women and children form a much larger percentage.

Mr. Hallows.—Yes.

President.—From the factory point of view, do you consider it a good occupation for the children?

Mr. Hallows.—They are not allowed to be employed unless they get a certificate that they are of a certain age. We take precaution with regard to the place being very open. Generally they have this box filling in sheds and we don't allow anything to be stuffed round it, so that there can be a quick escape in case of fire. But as regards prohibiting the children from working, we can't do it.

President.—According to the factory law, they can only work for a certain number of hours.

Mr. Hallows.—Yes.

President.—When the work is taken home, there is no guarantee that labour is not being sweated.

Mr. Hallows.—There is no guarantee that they are not worked day and night either.

President.—From that point of view, it is an objection.

Mr. Hallows.—Yes. It is also a dangerous occupation. As a matter of fact a few months ago I was going round a mill area in Bombay and I heard some noise. I went inside and found about 50 women squatting on the floor and making these fireworks. I consider this very dangerous and I think sooner or later Government ought to prevent that kind of thing.

Government revenue.

President.—One proposal that we are considering is how to secure for Government a certain amount of revenue which the Government expected when it put on this heavy import duty of Rs. 1-8-0. Government levied this duty in the hope that it would get a certain amount of revenue. Now as you know more and more matches are being manufactured in the country and the Government revenue is gradually diminishing and if the industry extends

obviously most of it must vanish and the proposal is whether some form of excise duty may not be levied on matches and we are considering what would be the best method of levying and collecting that duty. We have just now been discussing the question of manufacture in bond. We have pointed out to you some of the difficulties, as regards the match industry, because some factories are very small and they may not bear the expense. There was then the other system which was applicable in the case of the cotton excise duty. There also unless books were regularly kept and the manufacture was on a fairly large scale, the difficulties would be very great. Then, there is one other alternative, that is levying an excise duty by means of labels or stamps. You may have seen how stamps are put on some of these match boxes, bottles of medicine, etc. We are considering whether that would not be a suitable way of levying the excise duty.

Mr. Ghosal.—It is quite simple and all right in the case of big factories, but in the case of a small industry the question is—which department is going to be responsible for this work in scattered villages?

President.—Supposing the law prescribed that no matches shall be sold except in containers bearing a certain label, do you think that the Excise Department would find themselves unequal to the task of preventing illicit sales?

Mr. Ghosal.—The Excise Department staff is very limited—often we have one inspector for three talukas. Therefore it would be difficult for this Department to cope with this work successfully. The supervision will be inefficient.

President.—Ordinarily of course the bulk of the production would be from big factories.

Mr. Ghosal.—Big factories can be easily supervised. There is no question about that.

President.—Your Excise Department may be in a position to supervise that?

Mr. Ghosal.—In the case of big industries manufacturing in bond we can manage easily. So far as Bombay is concerned there are at present no cottage industries.

President.—The difficulty is as regards the collection of excise duty. Even if we have manufacture in bond, there is another difficulty and that is that unless we have these labels matches may be imported from outside.

Mr. Ghosal.—I mean when the manufacture is in bond we can easily arrange for the labelling to be done. Labelling is necessary. What I meant was that the excise staff cannot efficiently supervise any labelling or supervising work if there are any cottage industries on a large scale.

Mr. Mathias.—You have considerable district experience. Would it not be possible for the revenue staff to check these in the same way as they check the opium shops.

Mr. Ghosal.—The Revenue Department ought to be able to supervise this work, though the inspection of opium shops is only an additional check, the real check for such shops being left to the Excise Department.

President.—Mr. Brander, as Collector of Bombay, did you have any preventive staff also?

Mr. Brander.—There is some excise staff under the Collector of Bombay for his local area.

President.—Besides that has the Collector of Bombay any preventive staff or does he depend on the police for any offence against the Arms Act? Perhaps that would be under the Commissioner of Police.

Mr. Brander.—Undoubtedly.

President.—Has the Collector of Bombay got any separate detective or preventive department under him?

Mr. Brander.—There are special men for cocaine; there is a special staff for the country tobacco department. The Bombay City has a peculiar system of licences for selling country tobacco. So we have to keep a permanent

staff to prevent country biris being imported from outside and sold in the city.

President.—Is that excisable?

Mr. Brander.—That is merely a sort of special concession which was given to the Bombay Municipality in 1857. They get a net revenue of Rs. 4½ lakhs from that.

Mr. Ghosal.—It is really an octroi which the Bombay Municipality used to levy. Instead of octroi it is converted into duty and the Excise Department is entirely the agent of the Municipality for collecting that revenue.

President.—I did not know that there was any such system here.

Mr. Ghosal.—There is a duty of Rs. 7-8-0 per maund on all tobacco coming into Bombay, and nominally for keeping a check on the transaction we issue a license to any person who sells tobacco, whether manufactured or pure; the biriwalla has to pay one rupee license fee.

President.—It is an interesting point. So far as Bombay is concerned you can allow the same license to sell matches more or less.

Mr. Ghosal.—Yes.

President.—If you license the biriwalla there is no reason why you should not be able to license a man to sell matches.

Mr. Ghosal.—As regards license for selling there should be no difficulty.

President.—Do you have to license hawkers of biri?

Mr. Ghosal.—Tobacco in any form is not allowed to be hawked.

President.—How many licenses have you here for biris?

Mr. Ghosal.—One thousand four hundred.

President.—Ordinarily the man who sells biris will also sell matches.

Mr. Ghosal.—Yes.

President.—What is the expenditure in proportion to the revenue from tobacco.

Mr. Ghosal.—Cost of collection is Rs. 64,000 and revenue Rs. 5 lakhs.

Mr. Mathias.—What is the amount of licence fee?

Mr. Ghosal.—One rupee each per year.

President.—You hand over the revenue to the Corporation.

Mr. Ghosal.—The nett revenue is handed over to the Corporation.

Mr. Mathias.—That is administered by the Excise Department?

Mr. Ghosal.—Yes. The retail sale must not be exceeding 14 seers. Up to 4 seers they are allowed to import without a permit.

President.—Then the small biriwallas can do without a license.

Mr. Ghosal.—Yes, for import only.

President.—For selling?

Mr. Ghosal.—For selling the rule is that anyone selling biris has to have a license.

Mr. Brander.—Once or twice an attempt was made to abolish this but the Corporation would not agree to it.

President.—Is there a proposal now to levy an excise duty on tobacco?

Mr. Ghosal.—That was one of the recommendation of the Taxation Enquiry Committee.

President.—Has the proposal matured at all so far?

Mr. Ghosal.—It is still under consideration I think.

President.—As regards stamping all these match boxes, one of the reasons for this suggestion is to detect illicit importation into British territory so that these labels would apply both to foreign matches, they would vary in amount and value—as well as to matches manufactured in the country. Do you think if a system of labels was adopted, it would help the Excise Department a good deal to stop the illicit importation of matches into British territory?

Mr. Ghosal.—What I want to convey is that the excise staff must be big enough to do this work efficiently. This requires more or less village inspection, and we cannot do that with our present staff.

Mr. Brander.—Will not such labels be easily counterfeited?

President.—No.

Mr. Brander.—What is the difficulty in making a similar one here?

President.—No difficulty at all. What I was suggesting was that it would not take very much time to inspect whether any matches were sold without labels.

Mr. Ghosal.—Of course it might help if this was made penal; in that case people would be afraid, specially if the profits be small.

President.—If it is made an offence to sell matches without label it would not throw a great deal of work on any department.

Mr. Ghosal.—Provided they had the opportunity of adequate inspection. All I am urging is that the present excise staff cannot cover large tracts within a reasonable time. Therefore checking would be very difficult or a farce.

President.—Taking the question of smuggling of Indian liquor, it is easy to smuggle one or two bottles from an Indian State to British India?

Mr. Ghosal.—These borders are specially watched; our staffs are more concentrated on the borders than in the interior. But for match inspection concentration in the interior is necessary. I think the best agency to do that is the village police patil.

President.—You suggest that it would be better to hand it over more or less to the police and make it a sort of cognizable offence?

Mr. Ghosal.—Yes, to the police or the revenue officer.

Mr. Brander.—I think the police will object because they will say that it is a purely excise case.

Mr. Mathias.—Will there be any difficulty about the revenue staff? Do you think the revenue staff will object to doing this?

Mr. Brander.—They will complain that they are overburdened.

Mr. Mathias.—Any staff will complain that they are overburdened.

Mr. Brander.—They have a very complicated system of record of rights and that sort of thing. That is my experience.

Mr. Mathias.—What about your village staff?

Mr. Brander.—We call them village patils. But their sympathies are entirely against the excise staff in excise matters. We find that in cases of illicit distillation and so on. Most of them are too illiterate.

President.—Mr. Brander, you are now in charge of the Satara district?

Mr. Brander.—Yes.

President.—As regards your country liquor it comes from Nasik.

Mr. Ghosal.—It comes from Khanapur.

President.—You have got a Government warehouse I take it?

Mr. Brander.—Yes.

President.—Supposing it was a case of Government monopoly in matches would it be feasible for Government to sell matches at the same warehouse as you sell your country liquor?

Mr. Brander.—Special buildings will have to be put up, there is no room at present in the compound.

Mr. Ghosal.—Warehouses can be hired at any time.

President.—It is a question whether it would be necessary to have a duplicate staff. It is easier to sell matches than to sell liquor.

Mr. Ghosal.—There is one warehouse in the whole district. Is it suggested that all the matches should be collected for the district in one warehouse at the headquarters of the district?

President.—If Government undertakes the monopoly it will have to have its warehouses in different district undoubtedly, and I was wondering whether

this system that is already in existence might not also be utilized for the purpose to the extent to which it is possible to do?

Mr. Brander.—I think it would add enormously to the price of matches if we were to concentrate in one particular warehouse. It would upset the present arrangements; they are now coming to all stations.

Mr. Hallows.—That system would apply to every small village in existence and it would, I think, need tremendous supervision to watch it.

President.—Were you in charge of stamps while you were Collector of Bombay?

Mr. Brander.—Yes.

President.—What agency did you have for the distribution of stamps?

Mr. Brander.—We had a large stock in Bombay of revenue and postage stamps.

President.—There you have a system by which you have got to distribute stamps to so many different places?

Mr. Brander.—They are sent out to district treasuries and from the district treasuries to the taluka treasuries and they distribute them to the various departments, stamp vendors, post offices, courts, etc. That is how that is done.

President.—Can the same department undertake the distribution of matches for Government? Most people require some sort of stamps.

Mr. Brander.—Stamps are such a small article as regards bulk and unlike matches stamps come from one source. They are now making them at Nasik. As regards cotton excise although there was a provision in the Act for bonded warehouses, they were never used in practice because the cost of running such bonded warehouses would be enormous and the manufacturers issue the goods as fast as they can.

President.—I think we sent you a copy of the evidence which we took in Burma. There we asked the Commissioner of Excise as to what it would cost if we were to have manufacture in bond of matches and his estimate was about Rs. 250 a month.

Mr. Ghosal.—We have got 4 bonded warehouses in the Bombay City, one in Ahmedabad and one in Baroda where spirituous medicinal and toilet preparations are manufactured. The actual cost in each place comes to about Rs. 1,800 for the staff—pay, pensions allowance, etc.

Dr. Matthai.—Corresponding to what amount of revenue?

Mr. Ghosal.—We have nothing to do with the revenue or income of those private concerns.

President.—There are some soap factories and perfumery factories. Is the manufacture done in bond?

Mr. Ghosal.—Soap is not manufactured in bond and the Excise Department has nothing to do with the manufacture. The manufacture of perfumed spirit is controlled by license, but there is no manufacture in bond. Spirituous medicinal and toilet preparations are manufactured in bond. A reduced rate of Rs. 5 per proof gallon on the finished product. The concession is only granted in the case of spirit manufactured in India.

President.—Are they manufactured in bond just now?

Mr. Ghosal.—Yes.

President.—About how many.

Mr. Ghosal.—There are five at present, I think—the Gujerat Chemical Works, Ahmedabad, Powell and Company, Kemp and Company; M. J. Gujjar and Company and Wright and Company.

President.—What about Eastern Chemicals.

Mr. Ghosal.—That is not in bond.

Mr. Mathias.—Do you have any Government staff at the factories of these chemical works?

Mr. Ghosal.—No excise staff.

Mr. Mathias.—How does the bonded system work?

Mr. Ghosal.—Quite all right.

Mr. Mathias.—If no Government staff is stationed at the chemical factories, how do they work?

Mr. Ghosal.—It is only where alcohol is used that we have the bonded system. These chemicals are not alcohol so I have nothing to do with them.

Mr. Mathias.—How does the bonded system work.

Mr. Ghosal.—We depute to each one sub-inspector and one peon. When any kind of manufacture goes on the Sub-Inspector has to be present and whenever the spirit is issued he has to see how much alcohol is used for this purpose.

Mr. Mathias.—Suppose a Chemical works took a certain amount of alcohol from you, then you will have to send an inspector?

Mr. Ghosal.—Yes. So long as the spirit is not duty paid.

President.—Mr. Brander, is the Collector of Bombay simply the selling agent for these stamps or is he in charge of the manufacture?

Mr. Brander.—He is simply a distributing agent.

President.—He practically utilizes the revenue department for that purpose?

Mr. Brander.—After he has sent these to the treasury officers, he has finished his duty. After that the distribution is made by the treasury officer who is a Deputy Collector.

President.—It has to pass through the Collector of Bombay?

Mr. Brander.—He is called the Superintendent of Stamps working under the Stamp Act.

President.—That Superintendent of Stamps is under the Collector?

Mr. Brander.—He is the same individual.

Mr. Ghosal.—The treasury officer has also to send it in bulk to the postal department and they have their own distributing agents.

President.—There is no excisable article just now where you have these labels except that in the country liquor you have sealed bottles?

Mr. Ghosal.—We have not got the sealed bottle system in this province.

President.—What would be the cost of establishment supposing matches had to be manufactured in bond for each factory. Can you give us some idea?

Mr. Ghosal.—I should say about the same, about Rs. 1,800 a year for each factory.

President.—That would not be very much. The difficulty arised only in regard to these very small factories.

Mr. Ghosal.—Yes.

President.—Then Government may perhaps get over the difficulty by saying that each factory should be licensed and that no licence should be issued unless it is able to manufacture in large scale. In that case the smaller factories would cease to function. Unless a factory is able to meet the expenses of maintaining a staff, it is no use its carrying on.

Mr. Ghosal.—Yes. The minimum is about Rs. 1,800.

President.—Would you consider the staff reliable for that purpose?

Mr. Ghosal.—I think so. The moment you put in an excise staff, the superior officers will automatically go and inspect the work of that staff. Thus we are not relying on that local staff alone but also on the supervision by superior officers.

President.—The difficulties of maintaining a check are greater in matches than they are for instance in country liquor.

Mr. Ghosal.—Why should they be, because after all, all that the staff has to do is to see that the products are stored somewhere and that the final products do not go out without labels.

Mr. Mathias.—After all, illicit manufacture of country liquor would be easier than illicit manufacture of matches?

Mr. Ghosal.—Probably, but I was referring to manufacture in bond.

Oral evidence of Mr. G. G. LAIRD MacGREGOR, I.C.S., Collector of Salt Revenue, Bombay, recorded at Bombay on Tuesday, the 13th December, 1927.

Introductory.

President.—Mr. MacGregor, you are the Collector of Salt Revenue?

Mr. MacGregor.—Yes, Collector of Salt Revenue, Bombay Presidency, not including Sind.

President.—How long have you been in charge of this?

Mr. MacGregor.—Since 1st March 1924.

President.—Have you held this post before?

Mr. MacGregor.—Yes. I acted before once for four months.

President.—When was that?

Mr. MacGregor.—In 1911 or 1912.

President.—You are in charge of the whole salt administration, are you?

Mr. MacGregor.—I am in charge of the sole administration of the Presidency proper; I am also in charge of the customs up and down the coast, from the Gulf of Cambay as far as the extreme south of the Presidency with the exception of Bombay itself.

President.—Who is in charge of Bombay?

Mr. MacGregor.—Mr. Watkins.

President.—He is the Collector of Customs?

Mr. MacGregor.—Yes, he has nothing to do with salt.

Mr. Mathias.—Do you work under the Central Government?

Mr. MacGregor.—Yes.

President.—You are in charge of the customs barriers?

Mr. MacGregor.—I have got the Kathiawar land frontier; I have got the Viramgam customs line which is part of that land frontier. I have got a small frontier about 20 miles round Daman and I have got another frontier of about 160 miles round Goa itself.

President.—Do you deal with the coast only?

Mr. MacGregor.—No, with the land frontier shutting out Goa from British India on the land side.

President.—What about those Indian States that are inland, say in Mahi Kantha?

Mr. MacGregor.—I have got nothing to do with them. They get all their goods customed by us before they reach them.

President.—Are you in charge of the Government salt works?

Manufacture of Salt.

Mr. MacGregor.—Yes, at Kharaghoda in Cutch. May I explain the salt position? When under Sir Charles Pritchard salt was centred in and round Bombay there were no important salt works for sea salt except within a radius of 30 miles of Bombay. On each side of Daman and Goa he left two salt works in order to keep prices down in order to prevent smuggling. The principle there is excise. In the sea salt works the trader makes his own salt and sells it to his best advantage and we do not interfere. We collect the duty. That is the case also round Bombay. There are two salt works, one at Dharasna and one at Maroli, one on each side of Daman. As regards the salt works at Dharasna we pay the salt workers; they get the money for the salt which they make when the salt is sold.

President.—Is it chiefly by evaporation?

Mr. MacGregor.—Up in Kharaghoda, up on the Runn of Cutch, it is entirely by evaporation. It is exported largely to the United Provinces and the Central Provinces. There, i.e., Kharaghoda, it is entirely departmental. It is made from brine wells. We distribute the pans and fix the amount of

production and we pay for what they produce. We pay them on the spot when salt is going into storage.

Mr. Mathias.—How do you fix the price?

Mr. MacGregor.—The price is fixed at 2 annas a maund.

Mr. Mathias.—How do you fix it?

Mr. MacGregor.—Originally it was one anna, then 1 anna 9 pies, then it was 2 annas and then it was raised to 2 annas 3 pies. When we wanted to push the production we paid 2 annas 9 pies and then reduced it to 2 annas 3 pies and recently it is back again to 2 annas. It is purely arbitrary. It is merely a question of supply and demand.

Mr. Mathias.—Has there been any combine to push up the prices?

Mr. MacGregor.—We have been very lucky. We had a family of Mahomedans Khan Bahadurs who have great influence with these Agarias, salt workers, who are very ignorant people and we have managed to avoid anything in the nature of a combine. In fact, I reduced the rates from 2 annas 9 pies to 2 annas 3 pies and there was not a murmur.

President.—You purchase all the salt that they manufacture?

Mr. MacGregor.—We purchase all that they manufacture subject to quality.

President.—How do you dispose of it?

Mr. MacGregor.—It is stored there and we sell it at prices fixed from time to time. At present it is Rs. 4-3-0.

President.—That includes the excise duty?

Mr. MacGregor.—It does not include excise duty. The excise duty is Re. 1-4-0. It does not include packing, loading and sewing either, which the merchant can either do himself or get it done for him by agents at fixed rates.

Mr. Mathias.—You store it in a warehouse?

Mr. MacGregor.—We have 4½ lakh maunds under cover for sale during the monsoon; the rest is stored in open heaps.

Dr. Matthai.—What proportion of your total production is produced in Government factories?

Mr. MacGregor.—One to three.

President.—And the rest is manufactured by the people?

Mr. MacGregor.—Yes, by people who own salt pans.

President.—But they cannot sell it direct; they must sell through you only?

Mr. MacGregor.—They sell direct.

Mr. Mathias.—How do you assess the duty on that?

Mr. MacGregor.—The duty is fixed at Re. 1-4-0.

President.—How do you do that? Have you got inspectors to go round? Do your inspectors go round and measure the production?

Mr. MacGregor.—There is an eye estimate. We don't weigh into store on the scale as Madras does. The quantity sold is checked. It is weighed out by a Government clerk and it is then sent out to the preventive station. We only collect the duty on it. In some cases we do collect a small amount in the shape of what is called ground rent.

Mr. Mathias.—How do they effect their sales?

Mr. MacGregor.—After they effect the sale they have to have a permit from me to remove the salt. They go to my Chief Accounts Officer generally and they get a permit from him.

Mr. Mathias.—This system is somewhat cumbersome?

Mr. MacGregor.—I don't think so.

Mr. Mathias.—A merchant dealing on a large scale would find it cumbersome to get a permit in each case, would he not?

Mr. MacGregor.—There is no limit to the size of a permit. The salt works have got to take a permit for each separately.

Mr. Mathias.—What I was thinking of is this. If you had a factory on a very large scale from which a man was exporting, say, 2,000 bags of

salt, it would be rather troublesome if you had to check and weigh all that?

Mr. MacGregor.—It would be undoubtedly.

President.—It is practically manufactured under Government supervision?

Mr. MacGregor.—It is guarded and the Government is supposed to take an actual interest in the process of manufacture but as a matter of fact, I don't think they do take much interest. We don't stand guarantee for the quality. If they make any inferior salt they find they won't get a market for it and before the beginning of the next season they throw back into the pans any salt which is of inferior quality in order to strengthen the brine. That is done with my sanction.

Dr. Matthai.—That means practically private parties manufacturing in bond?

Mr. MacGregor.—It is. The salt in heaps is guarded; there is an actual guard round the pan during the process of manufacture.

President.—You can only do that in dry weather.

Mr. MacGregor.—It begins in October and the storing commences in November and continues till June.

President.—Does it give you time enough?

Mr. MacGregor.—They can make 140 lakhs of maunds of sea salt and there is no real market for more than 100 lakhs, and as you get nearer the monsoon evaporation is much quicker and the salt is produced very quickly. Where they collect from the pans once in 5 days at the start, they collect once in 3 days and even once in 2½ days so the bulk of the production comes really in the hottest months of the year.

President.—What does the production come to per month?

Mr. MacGregor.—I can't tell you per month but they make about 100 lakhs a year and Government makes about 28 lakhs that is about a quarter.

Dr. Matthai.—Apart from the actual guarding is there any way by which you can check whether the salt has passed into the market without paying the duty—some method like this, e.g., you have some idea of the cost of production and then you find that in some market it is being sold at below the price represented by the cost plus the duty.

Mr. MacGregor.—My answer to that is that the guarding arrangements are so good that there is no salt going out. Practically speaking everybody is reconciled now to buying licensed salt.

President.—That is rather a small quantity, is it not?

Mr. MacGregor.—They generally make more than 100 lakhs of maunds but they do not sell more than that. 3 to 4 lakhs of maunds of salt are thrown back into the reservoir, at the beginning of the next salt producing season.

President.—Is the salt exported from Bombay?

Mr. MacGregor.—Yes. Last year I got them going again. They sent 9 lakhs of maunds to Calcutta. The year before it was only 4 lakhs. It is also exported to foreign Malabar (Cochin and Travancore). We collect a nominal duty of 3 pies a maund to meet the cost of establishment.

Mr. Mathias.—Apart from the salt manufactured under your charge Government also manufactures salt somewhere in the North, does it not?

Mr. MacGregor.—Yes. That is not under me, but under the Northern India Salt Commissioner under whose supervision salt is manufactured at Sambhar in Jodhpur and Jaipur. Salt is also manufactured at Khewra in the Salt Range and also at Kohat when salt is excavated in salt mines.

Mr. Mathias.—Is that the main supply?

Mr. MacGregor.—The main supply is Sambhar which supplies about 40 lakhs and Khewra about 28 to 30 lakhs of maunds of salt.

President.—Sambhar is a salt lake, is it not?

Mr. MacGregor.—Yes.

President.—Is it done in the same way, by evaporation?

Mr. MacGregor.—I have never been there but I am told so. There is also the Sind salt which is not under me, and there also salt is made by evaporation from brine water.

President.—There is also salt manufacture in Aden?

Mr. MacGregor.—I suppose the Aden works are under the Government of India but for Customs purposes Aden is foreign territory.

Dr. Matthai.—In these private factories what proportion does your cost of establishment bear to the revenue that you get?

Mr. MacGregor.—I am afraid I could not tell you, but I could get you the figures if you want?

[*Note.*—The cost of guarding salt is 3.11 per cent. of the duty collected.]

Mr. Mathias.—Is there any attempt to control prices?

Mr. MacGregor.—None whatever.

President.—Do the dealers deal direct with you when they want to buy Government salt?

Mr. MacGregor.—Yes, direct in this way. There are certain railway stations where purchasers can pay money in and we are informed of it and the manager of my salt stores issues a permit. It is done in strict rotation and when the turn of the purchaser comes he can get it either direct from the salt stores or by paying the money in to my Chief Accounts Officer in my office and obtaining a permit.

Mr. Mathias.—After paying the money in the Treasury and obtaining a challan do they have to produce the challan at the place where the salt is delivered?

Mr. MacGregor.—I am not certain about that.

President.—Are you in charge of imported salt also?

Mr. MacGregor.—Very little is imported here. The Collector of Customs is in charge.

President.—Then as regards the Kathiawar ports what is the arrangement between the Government of India and the ports as regards salt?

Mr. MacGregor.—Dhrangadhra, although it is an Indian State, has also got the right of making the same salt as I make at Kharagodha but it is not allowed to export the salt into British India. Baroda is going to export salt from Okha to the Calcutta market but I have only heard of it being exported up till now from Kodinar near Din. They export that without let or hindrance and in the last two or three years they have been given permission to export the salt to Calcutta.

President.—Would that be liable to duty when it comes into a British port?

Mr. MacGregor.—As arrangements stand at present they have got to pay duty before the salt leaves Kodinar.

President.—Do you mean to the British Government?

Mr. MacGregor.—Yes. They actually do export trade now with other places outside India without our knowing any particulars. We came to know of it by accident because a 175 ton boat was wrecked off the Ratnagiri coast and the rescued persons said they were bound for Penang, so that they were taking the salt there without our knowing anything of it. All that we want is that they should not land any salt surreptitiously in India.

President.—As regards consumption of salt in Kathiawar what is the arrangement now? Do they do just as they like or have the Government of India any control.

Mr. MacGregor.—Several States make their own salt.

President.—Can they import it if they like from outside?

Mr. MacGregor.—Yes. But they get most of it from another Kathiawar State or make it themselves. For instance Dhrangadhra supplies a few of the other States.

President.—So far as the Indian States are concerned, it practically means that in this part of India the Government of India does not claim any share in the salt revenue. That is what it comes to.

Mr. MacGregor.—None whatever.

The customs barrier.

President.—Then as regards the customs barrier you are concerned not merely with salt but with anything that has to pass out of the customs barrier?

Mr. MacGregor.—Yes. The Kathiawar line—I am talking of the land line—running from the Luni river bordering on Jodhpur territory right down to the Gulf of Cambay.

President.—How many miles is it?

Mr. MacGregor.—180 miles; that is patrolled by a force of 800 men. That was originally not only a customs line but also a preventive line to keep the opium of Malwa out of Kathiawar where we farm the opium and the salt of Kathiawar from coming to Gujarat where we farm the salt. Also until the end of December 1917, we collected customs principally at Viramgam where we had an Assistant Collector in charge. Then in 1918 as a gesture for the help given by the States during the war we agreed to abolish that line provided the maritime States of Kathiawar levied the same rates of duty as under the British Indian tariff and send us returns of their imports. I have nothing to do with Dia. Round Daman I have got a line with a hedge, which is more or less impenetrable, that is another 30 miles, there is then between Surat district and Dharampur, the Pargana of Nagar Aveli, which is Portuguese territory, and entirely enclosed, which we treat as British possession. They get all their stuff and they have got to pay customs duty on it. They cannot get their salt free from Daman to Nagar Aveli. On the other hand they do us down by getting a lot of liquor smuggled into British India without our being able to catch them. Then round Goa I have another line which goes from the sea not far from Vengurla right up to the Ghats in the Belgaum district and passing Castle Rock, which is on the railway, and down below the Ghats again between Kanara and Goa. That is 160 miles.

President.—You have got to keep watch?

Mr. MacGregor.—That is patrolled by 800 sepoy. Some part of the line is fenced and some part is river bank. They dump their stuff and you cannot stop them very much. We do make captures but not to the extent to which we can say there is real protection. Water is rather a disadvantage. It is deep enough for boats on either side and they can land goods anywhere.

President.—When the Kathiawar barrier was abolished I suppose these were kept.

Mr. MacGregor.—Yes, the barriers round Goa and Daman.

President.—The Kathiawar barrier was abolished in 1918 and it has been reimposed since July this year?

Mr. MacGregor.—Yes, in the month of June or July, I think.

President.—Does it now work as before?

Mr. MacGregor.—It is worked entirely on different lines. In the old days we took every pie of the duty that was due to us; now we exempt the duty on Kathiawar produce agricultural, mineral, manufactured and so on—and the whole time, whether the line is on or not, under a treaty with Bhavnagar any imports coming from Bhavnagar accompanied by a bill of entry is passed through, even when the customs line was in force before 1918, without payment of duty.

President.—They can come into British India.

Mr. MacGregor.—Yes. You can find that in Aitcheson's Treaties. In 1860, there were grounds for giving them free entry because we owed them something and we set that off against their profits on the customs.

President.—Does it mean that they can import any unlimited quantity of any stuff they like into British India?

Mr. MacGregor.—Yes, except certain things like salt, opium, etc., which are excisable. They can import these into their own territory but they cannot pass them through our line.

President.—They can manufacture anything they like in their State?

Mr. MacGregor.—They can manufacture anything they like, and except salt, liquor, perfumed spirit and that sort of thing, we allow them through our line.

Mr. Mathias.—You say excisable articles. Take a case in which the import duty is very much in excess of the excise duty. If they imported those articles, when they passed the excise barrier, would they pay an excise duty or customs duty?

Mr. MacGregor.—They would not be allowed to pass the barrier.

Mr. Mathias.—Not at all?

Mr. MacGregor.—No.

Mr. Mathias.—Not even on payment of the duty?

Mr. MacGregor.—No.

President.—Take the case of matches to-day. If Bhavnagar imported matches it could do so, but would they be allowed to send the goods into British India from Bhavnagar?

Mr. MacGregor.—Yes. If they levied the British Indian rate of duty on that. They send us returns from Bhavnagar.

Mr. Mathias.—Supposing they did not levy any duty?

Mr. MacGregor.—They ought to; or we should tumble on to it eventually if they did not.

Mr. Mathias.—They are allowed to import anything except excisable articles?

Mr. MacGregor.—Under the terms of the treaty they ought to impose the same duty that is imposed in British India at their port.

President.—Supposing a man brings his goods from one of the ports which are not subject to the treaties, how does he prove that he has paid duty to the Indian State?

Mr. MacGregor.—We take the State's word that he has paid the duty. He has to produce the shipping bill or something to show that the stuff has been landed in Bhavnagar. Recently I had a quarrel with Sir Prabhashankar over stuff coming into Bhavnagar by land from Junagad or Porbandar on which he levied Indian rates of duty. But our treaty deals with sea customs, not land customs. That point has to be threshed out. We say he is not entitled to the most favoured nation treatment.

President.—But the fact of payment so far as you are concerned is proved merely by his producing the shipping documents?

Mr. MacGregor.—Yes, that goods have been landed, and they have also their returns which they submit to us. With the 1918 removal of the customs barrier at Viramgam the States agreed to submit returns of their imports.

President.—Of course you have got to depend on them?

Mr. MacGregor.—We have no individual there to check, because it would be looked upon as an infringement of their sovereignty rights to have our chowkidar there. In the old days at one time we had a treaty with Goa whereby we had our Sarkarkund at Goa to supervise the manufacture of salt. That was rather a difficult position to maintain.

President.—May I take it that any article whether imported into or manufactured in an Indian State, if brought into British India, is liable to your customs duty?

Mr. MacGregor.—The Sea Customs duty; that really affects the maritime States. As regards land customs we live and let live very largely except on the Kathiawar line.

Manufactures of Indian States.

President.—Supposing an Indian State say, Baroda, has got a big textile mill, can the goods come into British India without paying any excise or any import duty?

Mr. MacGregor.—Yes, because we have no land customs against Baroda.

Mr. Mathias.—At the time when there was the cotton excise were they then allowed to import cotton goods into British India without paying any excise duty?

Mr. MacGregor.—I think so. Cotton excise was always collected by the Collector of Bombay and I had nothing to do with it.

President.—Take the case of matches just now. If an Indian State started manufacturing matches, for instance a State like Baroda, it would be able to send matches to British India without paying any duty, would it not?

Mr. MacGregor.—Yes. It is the same as if the factory was at Ambarnath or actually in British territory.

President.—Supposing an excise is levied in British India, will the matches manufactured in an Indian State still come without duty?

Mr. MacGregor.—It undoubtedly would because it would be impossible to put a cordon round every Indian State.

President.—What is the existing arrangement?

Mr. MacGregor.—The existing arrangement is that it is absolutely free.

President.—Would it be within the power of the British Government to put a cordon?

Mr. MacGregor.—Yes. The general policy of Government is to abolish land customs as far as possible. There was a tremendous amount of land customs during the Peshwá days, but we have rather gone on the line that the land customs should be abolished because they are hampering trade. I think it is absolutely impossible to put up a land customs barrier against all the Indian States. If you are going to do it thoroughly, you would have a hopeless network.

President.—The position would be very difficult for the British Government to get any revenue at all because all the matches could be manufactured easily in, say, Baroda, and they could then be exported into British India?

Mr. MacGregor.—Yes. You would have to have agreements with whatever state started a factory that they would levy the same excise which we levy in British India. That is how salt was originally dealt with.

President.—Apart from the reluctance of the British Government to impose this land barrier, under the law would the British Government be entitled to levy duty on goods coming from Indian States?

Mr. MacGregor.—In the revised Land Customs Act I think there is some clause under which that particular section regarding the imposing of the land frontier is not to be operative against an Indian State. I cannot tell you exactly without referring to the Act.

President.—We should like to know what the position is. Take any of the maritime ports of Kathiawar or belonging to Baroda. They can build a very big match factory there and they can use the same materials that we use here and send all their matches to British India.

Mr. MacGregor.—They could do that.

Dr. Matthai.—They probably did not do that in the case of cotton goods, at least there was not very much complaint apparently in British India that cotton goods made in Indian States came into British India?

Mr. MacGregor.—I don't know.

[Note.—I have since found out that the States did levy an excise.]

Dr. Matthai.—Perhaps in the case of cotton goods $3\frac{1}{2}$ per cent. did not make very much difference whereas in the case of matches it may make a very big difference?

Mr. MacGregor.—Yes.

Revenue labels on match boxes.

President.—In the case of the land frontier you can devise means by which you can prevent matches from coming into the British territory such as insisting on revenue labels being put on boxes. There is nothing to prevent the British Government from saying that nothing shall come into British India unless they fulfilled the conditions, one of the conditions, being that they should bear certain labels. Do you think that could be done in order to safeguard British revenue?

Mr. Mathias.—We mean a penal scheme imposing a penalty on anybody who sells matches or buys matches without labels?

Mr. MacGregor.—Of course that can be done. The only question is whether it would be an easy matter or not.

President.—If you punish a buyer who buys a box of matches unless there is a label on it, it would have a deterrent effect, would it not? Most people would not touch a box if they thought that it would be an offence to buy it unless there was a label. It would be a very simple arrangement.

Mr. MacGregor.—Would it pay anybody to send the labels back?

President.—No. It would be perforated so that when you open the box the label will be broken.

Mr. MacGregor.—The foreign matches have also got to have labels.

President.—The idea is that if protection is given to the match industry, gradually foreign matches would cease to come except in very limited quantities. Even if they came in, they would have to comply with the law just as much.

Mr. MacGregor.—Then they would have to buy their labels.

President.—Or they can put the labels in bond.

Mr. MacGregor.—That means breaking open their consignments.

President.—The packets would not be pasted at all; they would be sent loose.

Mr. MacGregor.—I understand that matches which come from overseas come in tin lined cases.

President.—They will have to be opened here.

Mr. MacGregor.—That would enormously increase the cost of matches.

President.—That has to be faced, if Government wants the revenue.

Mr. MacGregor.—On the other hand if they imported the labels and did the pasting in their own country, it would be very easy to forge label like that and they would be having a stock of labels in a country where Indian interests are not represented at all.

President.—The difficulty arises in this way. Supposing we allowed the Swedish Match Company to put labels in their own country it would be very difficult for this Government to check. Supposing they exported matches to the Indian States we should be up against the same difficulty there.

Mr. MacGregor.—If they import into Indian States I have got the customs barrier. I can check them there. If any control is wanted I can put it on, as far as Kathiawar is concerned. I do not know what the position is as regards Cochin and Travancore which are also maritime States.

President.—There may be some other case in which it may not be possible to do anything except to insist upon every box bearing a label when it comes into British India.

Mr. Mathias.—We were also informed in Burma that there are no customs barriers on the Chinese frontier.

Mr. MacGregor.—That is true and also not very much on the Siamese frontier.



सत्यमेव जयते

Director of Industries, Bengal.

A.—WRITTEN.

(1) *Letter, dated the 15th October 1927.*

Following up our visit to the cottage match manufacturing factories at Ultadanga this morning I send herewith 4 copies of a note on the possibilities of this industry on cottage lines drawn up by Mr. S. C. Mitter, our Industrial Engineer.

2. You will see that in this note he gives very full details of the conditions under which such factories work and makes a plea for—

- (a) the supply of splints and veneers from some central factory situated near to a suitable wood supply in the forest area;
- (b) the supply of chemicals, paper, etc., at wholesale rates by linking these concerns up to a co-operative organization, and in certain other ways which may be possible under the hire purchase facilities scheme proposed for the State-Aid-to-Industries Bill.

His proposals also include the supposition that an excise duty would be levied on power driven factories producing 250 gross and upwards per day, but not on small factories of the type we examined this morning.

Enclosure.

THE POSSIBILITIES OF MATCH INDUSTRY ON COTTAGE LINES IN BENGAL.

Opinion of the Industrial Engineer.

With reference to my note of 22nd January 1927, I beg to submit herewith a further list of match factories working at Ultadanga in Calcutta, with particulars of their daily output, number of men employed, method of manufacture, etc. It is reported that there are many such factories working in the neighbourhood of Calcutta at Howrah, Bantra, Salkia, Tollygunge, Belliaghatta and Baranagar, particulars of which cannot be collected unless I have a wholtime assistant for a considerable time which is not available. I got Khagen Babu a few hours a day only for a week to assist me and so I confined my enquiry only at Ultadanga centre for the present. Even for this centre the list is not exhaustive but it will give an idea of the extent of this cottage industry in the heart of the city where so many large match factories have been established.

2. It will appear from the list that most of the factories buy ready made splints and boxes and prepare finished matches. They perform all the finishing processes by hand and those that have machines, they use them only for frame filling which is a very laborious process. The cost of produc-

tion of these factories is estimated to be Re. 1-2 to Re. 1-4 per gross, details of which are given below :—

	Factories working entirely by hand including frame filling.			Factories using machine for frame filling.		
	Rs	A.	P.	Rs.	A.	P.
1. Splints	0	3	0	0	6	0
2. Boxes	0	3	0	0	3	0
3. Chemicals, papers labels, etc.	0	3	0	0	3	0
4. Frame filling	0	3	0	0	0	9
5. Paraffinning and dipping into chemicals	0	0	6	0	0	6
6. Box filling	0	1	6	0	1	0
7. Box pasting, wrapping of paper in and out	0	2	3	0	2	3
8. Pasting of labels	0	0	6	0	0	6
9. Dozen packing	0	0	6	0	0	6
10. Miscellaneous	0	1	0	0	1	0
TOTAL	1	2	3	1	2	6

3. The above estimates which I verified to my entire satisfaction to be substantially correct, perhaps require some explanation. The fact that factories working entirely by hand obtain their splints at only 3 annas per gross whereas those that use frame filling machine have to pay as much as 6 annas per gross may appear to be rather incongruous, but it so happens, because, hand workers generally use rejected splints that cannot be worked by machine and they obtain them at very cheap rate practically less than half the price from the big factories that have been started here. But this loss is well compensated by the saving in labour charges for frame filling and box filling that is effected by the use of machines and so the average cost of production with or without the machine is practically the same.

4. Of these two types the factories working with frame filling machines seem to have greater stability. Those that work entirely by hand with rejected splints run the risk of being extinct as soon as the supply is stopped by the larger factories and though the cost of production is the same their products are of inferior quality as they use rejected splints. These factories appreciate the usefulness of frame filling machine but they cannot afford to purchase them as these Japanese hand machines cost about Rs. 700 each.

It is perhaps possible to prepare and supply these machines at a much cheaper price and if this can be done the other factories are likely to use them.

5. Now if the factories that work with frame filling machines and use original and fresh splints to be taken as the lowest standard of match factories, and other factories are developed to this standard, which, as I have indicated above, is not difficult to do, it is to be considered whether it will still be an economic success. If the present tariff wall of Re. 1-8 per gross is maintained it will undoubtedly stand the competition of the imported matches because cheapness is the criterion of success in the Indian market and so far as it seems to me the quality of the products of these factories is not unsatisfactory. As regards competition with the large factories that have recently been established here mostly with foreign capital, it is difficult to say what will happen in future but at present it seems that they cannot beat the small factories in fair field. They offer attractive conditions of sale such as payment at three months' sight, etc., to the agents which the small factories with limited resources cannot possibly do. Consequently they

cannot get the market for their products unless they heavily reduce the price and the fact they are selling their stuff at 2 annas to 3 annas less than the products of the large factories clearly indicate that their cost of production is not disproportionately high. The large factories with their power machinery of course effect considerable savings in labour charges but they have to pay heavy interest on large capital, blocked in building and machinery, depreciation charges, and charges for expert supervision which form no insignificant part of the cost of production and in this respect the small factories have advantage over them. Besides it seems that it is possible to further reduce the cost of production of the small factories. They obtain their splints at present at As. 6 per gross but it will appear from our "Report on the investigations into the possibilities of match industry in Bengal" that arrangement can be made to supply match splints at As. 2-6 to As. 3 per gross. If this can be done, it will perhaps bring down the cost of production below Re. 1 per gross. These factories at present obtain their chemicals, papers, etc., in small quantities from the market at retail price. If a sale depôt could be organised and arrangement could be made to supply these articles to them at wholesale rate it will further reduce the cost of production.

6. So it clearly indicates that so far as the cost of production is concerned the position of match factories, on cottage lines, is not quite insecure. I am definitely of opinion that with adequate Government assistance they can be placed on a firm footing and I suggest that following steps be taken to stabilise the home industry method of manufacture of matches.

(a) To maintain the present rate of custom duty of Re. 1-8 per gross on imported matches.

At present the duty is levied for revenue purpose. It will be better if the duty is made protective. The usual "Infant industry" argument may be advanced in support of it.

(b) To levy an excise duty on the products of the large match factories working with power-driven machinery and producing 250 gross and upwards per day. We have 7 or 8 such factories in Bengal, majority of which are reported to be financed wholly or partly by foreign capital. These factories run by foreigners with foreign capital, are no economic asset to the country. On the other hand they are a menace to Indian enterprise. I do not know whether international obligation will allow Government to impose special excise duty, on a higher rate, on the products of the foreign factories, but if it is possible, I should recommend it. Any way an excise duty is desirable in our province as it will not affect more than 3 or 4 Indian factories but will benefit hundreds of small factories and will at once place them on a firm footing. The establishment of match industry in the country has reduced the importation of matches and thus affected, this important source of revenue to Government. The loss may be compensated to some extent if the excise duty is levied. The imposition of excise duty may also check the influx of foreign capital in match industry and if the small factories are allowed to escape, the industry is likely to develop on cottage lines. When the home industry system of manufacture of matches will reach higher stage of development and work on larger margin of profit the question of imposition of excise duty on their products allowing of course reasonable profit may also be considered.

If the excise duty is levied on a modest scale, say, As. 4 per gross, it will not perhaps affect the retail sale of Indian matches at one pice per box. I have shown that the cost of production of the small factories is little over Re. 1-2 per gross. It should be less in case of large factories equipped with complete power-driven machines. So it leaves sufficient margin to sell their products at one pice per box even if they have to pay As. 4 per gross as excise duty. The retail price of the best quality of imported matches is one and a half pice per box and so the products of the large factories which are much inferior cannot find market unless it is one pice. Besides the small factories unaffected by the excise duty will continue to sell their products at one pice per box and thus ~~take~~ ^{take} down the market.

(c) To assist the cottage workers with cheap supply of splints and veneers.

At present the cottage workers have to obtain their splints and veneers at a very high rate. The local suitable and available wood is "Gaon", the price of which has been increased to a considerable extent by the wood dealers on account of its extensive use in the match industry. The large factories have made arrangements with the dealers to supply them the best logs and the rejected logs and available to the small factories at practically the same price though comparatively very small quantity of splints and veneers are obtained from them. It is reported that splints cost the small factories nearly six annas for gross, but it will appear from our "Report on the investigation into the possibilities of match industry in Bengal" that if a factory can be started near the forest, it will be possible to supply splints and veneers at half the cost. I suggest that Government start a factory for the manufacture of splints and veneers in some suitable place and supply them at cost price to these small factories. I shall submit detailed scheme for such a factory if my proposal is accepted. When the small match works that will obtain their splints and veneers from the Government factory will sufficiently develop, Government may allow the factory to run on co-operative lines and gradually withdraw its interest. It will appear from the estimate that prices of splints and veneers form nearly half the cost of production of matches and if Government can give them the benefit of large scale production in this respect, it will go a long way to solve the problem of this home industry.

(d) To arrange for the supply of chemicals, papers, etc., to the cottage workers at wholesale rates.

The cottage workers cannot purchase their requirements of chemicals papers, etc., in large quantity and so they cannot import direct from England or the Continent, the result being that they do not get standard quality of materials and have to pay higher price. This difficulty can be solved if a sale dépôt is organised and the materials required by the match factories are made available to them in small quantity at wholesale rate. The Co-operative Department may be consulted if they can help them in this matter. If we can secure to the small factories the same advantage with regard to the supply of raw materials as the large factories have it will further strengthen their position. It will make possible for them to use standard quality of chemicals and follow a standard formula and thus improve the quality of their matches.

(e) To provide financial assistance to the small factories.

The greatest difficulty of the small factories at present is of course one of finance. The large factories and the importers generally sell their goods at credit but these small factories cannot do so as they have practically no working capital. They cannot wait for a better price and the dealers naturally take advantage over them; sometimes they have to sell at prices below the cost of production to meet labour charges. If they get banking facilities such as advances against stock it will be of considerable help to them. I do not know whether it is the function of the Co-operative Banks to grant such loans to industrialists. If so, it will not perhaps be difficult to organise co-operative union among these workers. The Co-operative Department may be consulted on this point also. When the State-Aid-to-Industries Bill will be passed the question of financial assistance to match industry may be further considered.

(f) To help the small factories with the cheap supplies of machines.

I have stated in detail the utility of the frame-filling machine but on account of its high price, it is not in extensive use by the cottage workers. The price of the Japanese machines that are being used is reported to be Rs. 700 each. It is perhaps possible to prepare and supply such machines at less than half of that price. If you agree, I may take up the design and construction of such machines and if it be successful, it may be supplied on hire-purchase system to the workers.

7. Now it may be argued why should Government give so much preference to the cottage workers. My grounds for recommending such preferential treatment are noted below.

(a) Match industry can benefit the children of the soil only if it can be made successful on cottage lines. If the industry is allowed to develop on large factory scale it will like so many other industries go out of the hands of the people of the country for, on account of their limited resources and lack of experience, they will not be able to compete with the mighty organisations of the foreign capitalist that have already been established here and will grow in number if the conditions for large scale production are made favourable. The establishment of these foreign Trust factories with unlimited resources is, as I have already stated, a great menace to Indian enterprise and unless this new industry is moulded to Indian condition it will not be an economic asset to the country.

(b) If the home industry method of manufacture of matches can be introduced, it will go a long way to solve the middle class unemployment problem. Match industry can be divided into various branches each forming a complete unit and may be regarded as a separate industry. These branch industries such as box-making, etc., can be started with a very small capital with prospect of developing a complete factory and so these offer a good career to poor and intelligent people of the "Bhadrologue" class and are likely to attract them. It does not require any very long training as women and children are doing this work and so any enterprising young man can easily start this industry. Besides there are many unemployed middle class people whose social position stands in their way of living by manual work. Match industry will provide them work in the seclusion of their home. Already at Ultadanga and other centres of this cottage industry many middle class people are carrying on this work in their houses.

(c) Match industry on cottage lines will help to *increase the national wealth* for it will provide work to those who are at present producing nothing and are *economically dead to the country*. Old men, women and children who are not fit for work in any factory can be engaged in match industry and thus they can add to their family budget.

(d) If the match industry can improve the economic condition of the people to some extent it will serve a great political purpose as it is admitted on all hands that the present unrest in the country is due largely to economic causes.

(e) It is truly said that "The art and heart of a nation live in cottages". The vices of industrialism are well known and from the social point of view, home industry is the ideal system as it makes it possible for the workers to live under the restraining and educative influence of communal and domestic life. In India the domestic feeling is very strong and so it is all the more suited to Indian condition. The cost of production in the home industry system of manufacture of matches, as I have shown, does not compare very unfavourably with that of the factory scale manufacture and so the consumers are not likely to be at all affected if the home industry system is introduced and as such it deserves the support of Government. If hand loom weaving industry can still survive the competition of the mill industry, it is not known why match industry on cottage lines cannot be made successful. Already it is a success in Japan which has developed an extensive export trade in matches.

8. So far about the comparative merits of the home industry and factory scale systems of manufacture of matches. Now, there is a section of people in the country who are opposed to the establishment of match industry in any form in India as in their opinion it is responsible for high prices of matches. They seem to confuse *between cause and effect*. The development of match industry is not the cause but an effect of high price which has been brought about by the imposition of heavy import duty of Re. 1-8 per gross. The abolition of the present high duty on matches may bring down the market but it is to be noted that the duty is levied not as a protective

measure but for revenue purpose and if Government is to consider the abolition or reduction of any revenue duty to reduce the burden of taxation on poor people, match cannot certainly merit attention in the first place. There are salt and such other articles of vital importance to people which should get preference. Besides, the duty on match will not really be a burden on poor people. The redeeming feature of this duty is that it has helped the growth of a new industry in this country and it may be claimed on behalf of the Indian match factories that they have made available matches at considerably reduced prices. The retail price of the imported matches is one and-a-half pice per box whereas their products are available to the people at one pice only. There is another class of matches produced by cottage workers with rejected splints and are sold not in boxes but as loose sticks. Some 200 or 300 match sticks, i.e., contents of 2 or 3 boxes are available for one pice. Already these sticks are selling in the Calcutta market places and in the mafussil "hats". With the growth of the match industry, more rejected splints will be available and so the supply will be greater. Those who are really poor can use this cheap stuff at practically the same, if not lower, price than before and so the duty as I have already said will not be a burden on them.

9. The above facts clearly indicate that the Indian match industry is not a curse but a blessing to Indian people and as to the line, in which it should be developed to be of the greatest service to the country, I have given, in details, my grounds for supporting the home industry system of manufacture of matches which I hope will receive the serious consideration of this department.

S. C. MITTER,

Industrial Engineer, Bengal.

The 10th February 1927.

List of small Match Factories at Ultadanga, Calcutta.

1. RAMPURJA MATCH WORKS, 33, Belgatchia Road, Calcutta.

(a) Date when started—1925.

(b) Capital invested—Rs. 15,000.

(c) Mode of working—It is a self-contained factory. They prepare their requirements of splints and veneers from local wood by power-driven machinery, which they use also for frame-filling. Other processes are done entirely by hand.

(d) Output—100 gross per day.

(e) Persons employed—Adult	50
Women	30
Boys	20
Girls	10

2. THE SUKUL MATCH FACTORY, Bagmari Road, Calcutta.

(a) Date when started—1924.

(b) Capital invested—Rs. 4,000.

(c) Mode of working—They purchase splints and boxes and prepare finished matches. All the processes are done by hand.

(d) Output—100 gross per day.

(e) Persons employed—Adult	12
Women	10
Boys	15

Besides, about 80 families are said to be employed by them from time to time.

3. SATISH MATCH WORKS, Ultadanga Doctor Bagan, Calcutta.

(a) Capital invested—Rs. 1,500.

(b) Mode of working—They purchase splints and boxes and prepare finished matches. All the processes are done by hand.

(c) Output—70 gross per day.

(d) Persons employed—Adult	6
Female	12
Boys	30

Besides, some 60 families are said to be employed by them from time to time.

4. R. N. MATCH FACTORY, Kakurgachi Road, Calcutta.

(a) Date when started—1925.

(b) Capital invested—Rs. 5,000.

(c) Mode of working—They purchase splints and boxes and prepare finished matches. All the processes are done by hand.

(d) Output—100 gross.

(e) Persons employed—Adult	10
Female	8
Boys	12

Besides, some 60 families are said to be employed by them from time to time.

5. BOSE BROS.' MATCH FACTORY, 34, Muraripukur Road, Calcutta.

(a) Date when started—1st August 1926.

(b) Capital invested—Rs. 500.

(c) Mode of working—They purchase splints and boxes and prepare finished matches.

(d) Output—100 gross.

(e) Persons employed—Adult	13
Women	15
Boys	15

Besides, about 25 families are said to be employed by them from time to time.

6. SIVADURGA MATCH WORKS, 44-12-1, Muraripukur Road, Calcutta.

(a) Date when started—1926.

(b) Capital invested—Rs. 800.

(c) Mode of working—Same as above.

(d) Output—80 gross.

(e) Persons employed—Adult	20
Female	20
Boys	10

7. SRISTA MATCH FACTORY, 35, Muraripukur Road, Calcutta.

(a) Capital invested—Rs. 5,000.

(b) Mode of working—They have arrangements for the preparation of splints and veneers in their factory. Other processes are done entirely by hand.

(c) Output—100 gross.

(d) Number of persons employed—Adult	10
Woven	8
Boys	15

Besides, about 50 families are said to be employed by them from time to time.

8. SREE KRISHNA MATCH FACTORY, 42-28, Muraripukur Road, Calcutta.

- (a) Date when started—1926.
- (b) Capital invested—Rs. 1,000.
- (c) Mode of working—They purchase splints and boxes and prepare finished matches.
- (d) Output—80 gross.
- (e) Persons employed—Adult 20
- Female 10
- Boys 12

Besides, about 40 families are said to be employed by them from time to time.

9. ANNAPURNA MATCH FACTORY, 42-16, Muraripukur Road, Calcutta.

- (a) Date when started—1926.
- (b) Capital invested—Rs. 1,000.
- (c) Mode of working—They purchase splints and boxes and prepare finished matches. The work is done entirely by hand.
- (d) Output—Full size 50 gross.
Half size 100 gross.
- (e) Persons employed—Adult 16
- Women 15
- Boys 15

Besides, about 70 families are said to be employed by them from time to time.

10. NARENDRA MATCH FACTORY, 21-35, Muraripukur Road, Calcutta.

- (a) Date when started—1926.
- (b) Capital invested—Rs. 500.
- (c) Mode of working—Same as above.
- (d) Output per day—Full size matches 25 gross.
Half size matches 60 gross.
- (e) Persons employed—Adult 15
- Women 10
- Boys 10

Besides, about 30 families are said to be employed by them from time to time.

11. BENODE BEHARI BOSE'S MATCH FACTORY, 1, Kanta Babu Bagan, Ultadanga, Calcutta.

- (a) Capital invested—Rs. 100.
- (b) Mode of working—They purchase splints and boxes and prepare finished matches. The work is done entirely by hand.
- (c) Output—25 gross.
- (d) Persons employed—Adult 2 and 30 families are said to be employed by them from time to time.

12. BROJOGOPAL BHOWMICK'S MATCH FACTORY, 1, Gouribaree Lane, Calcutta.

- (a) Date when started—1925.
 (b) Capital invested—Rs. 400.
 (c) Mode of working—Same as above.
 (d) Output—20 gross.
 (e) Persons employed—Adult Proprietor himself.
 Women 10
 Boys 3

Besides, about 25 families are said to be employed by them from time to time.

13. LAKSHMINARAIN MATCH FACTORY, 3-10, Gouribaree Lane, Calcutta.

- (a) Date when started—1926.
 (b) Capital invested—Rs. 300.
 (c) Mode of working—Same as above.
 (d) Output—15 gross.
 (e) Persons employed—Adult Proprietor himself.
 Women 3
 Boys 5

Besides, about 20 families are said to be employed by them from time to time.

14. HEMANTA KUMAR BOSE'S MATCH FACTORY, Haldarbagan, Ultadingi, Calcutta.

- (a) Date when started—1926.
 (b) Capital invested—Rs. 150.
 (c) Mode of working—They purchase splints and boxes and prepare finished matches. The work is done entirely by hand.
 (d) Output—10 gross.
 (e) Persons employed—Adult Proprietor himself.
 Female 6

Besides, about 12 families are said to be employed by them from time to time.

15. GRIHA LAKSHMI MATCH FACTORY, 1, Sastitolla Road, Narkeldanga.

- (a) Capital invested—Rs. 250.
 (b) Mode of working—Same as above.
 (c) Output—5 to 7 gross.
 (d) Persons employed—Adult Proprietor himself.
 Women 2

Besides, about 2 families are said to be employed by them.

16. VERBENA MATCH FACTORY, 7, Ratan Neogy Lane, Calcutta.

- (a) Date when started—1924.
 (b) Capital invested—Rs. 100.
 (c) Mode of working—Same as above.
 (d) Output—7 gross.
 (e) Persons employed—Proprietor himself, his family and 4 boys.

17. THE BENGAL MATCH WORKS, 2, Krishna Taran Naskar Lane, Ghusary.

- | | |
|--------------------------------------|----|
| (a) Date when started—1924. | |
| (b) Capital invested—Rs. 1,000. | |
| (c) Mode of working—same as above. | |
| (d) Output—30 gross per day. | |
| (e) Number of persons employed—Adult | 7 |
| Women | 15 |
| Boys | 20 |

18. BISWANATH MAHADEOPRASAD, 31-3, Belgachia Road, Calcutta.

- (a) Mode of working—Same as above.
(b) Output—25 gross.
(c) Persons employed—50 to 60.

19. BANGA LUXMI MATCH FACTORY, 30, Kundu Lane, Belgachia.

- (a) **Mode of working**—Same as above.
(b) **Output**—50 gross.
(c) **Persons employed**—100.

20. KRISTO DAS' FACTORY, Ultadanga, Basakbagan, Calcutta.

- (a) Date when started—1924.
(b) Capital invested—Rs. 200.
(c) Mode of working—Everything is being done by hand.
(d) Output—Full size 30,000 boxes (not finished matches).
Half „ 7,000 „ ditto.
(e) Persons employed—Boys 10
Adult 3
Female 14

Besides, about 20 families are said to be employed by them from time to time.

21. GOPAL CHANDRA DAS' FACTORY, 109/47, Ultadinga Main Road, Calcutta.

- (a) Date when started—1924.
- (b) Capital invested—Rs. 100.
- (c) Mode of working—Everything is being done by hand.
- (d) Output—Full size 15,000 boxes (not finished matches).
Half „ 7,000 „ ditto.
- (e) Persons employed—Boys 3
Adult 2
Female 2

Besides, 6 families are said to be employed by them from time to time.

22. P. C. DUTT & BROS'. FACTORY, 12-E, Badridas Temple Street, Calcutta.

- (a) Capital invested—Rs. 500.
 (b) Mode of working—Home industry.
 (c) Output—Full size 50,000 boxes (not finished matches).
 Half „ 60,000 „ ditto.
 (d) Persons employed—Boys 20
 Adult 10

Besides, 50 families are said to be employed by them from time to time.

23. GOPAL CHANDRA DAS' FACTORY, Basak Bagan, Ultadanga.

- (a) Capital invested—Rs. 50.
 (b) Mode of working—Home industry.
 (c) Output—Full size 10,000 boxes (not finished matches).
 Half „ 5,000 „ ditto.
 (d) Persons employed—Boys 6
 Adult Owner only.
 Female 3

Besides, 15 families are said to be employed by them from time to time.

24. ATUL KRISHNA DAS' FACTORY, Basak Bagan, Ultadanga.

- (a) Capital invested—Rs. 25.
 (b) Mode of working—Home industries.
 (c) Output—Full size match box 6,000 (not finished matches).
 (d) Persons employed—Boys 2
 Adult Owner only.
 Female 2

Besides, 10 families are said to be employed by them from time to time.

25. KRISHNA CHANDRA DAS' FACTORY, 109, Basak Bagan, Ultadangi, Calcutta.

- (a) Capital invested—Rs. 100.
 (b) Mode of working—Home industries.
 (c) Output—Full size match box—4,000 per day (not finished matches).
 Half size match box—3,000 per day (not finished matches).
 (d) Persons employed—Boys 3
 Adult Owner only.

Besides, 13 families are said to be employed by them from time to time.

26. GIRISH CHANDRA PATRA'S FACTORY, Shastitala Road, Narkeldanga.

- (a) Capital invested—Rs. 100.
 (b) Mode of working—Home industries.
 (c) Output—Full size match box—1,000.
 (d) Persons employed—Family members only.

27. MOHAMED ISUF'S BOX PASTING WORKS, Chatee Babu's Garden (Belgachia).

- (a) Date when started—1924.
 (b) Capital invested—Rs. 250.
 (c) Mode of working—Home industry.
 (d) Output—30,000 pasted boxes.
 (e) Persons employed—About 125 workers work at their off-time.

28. NABA CH. DAS' FACTORY, Ultadanga Basak Bagan.

- (a) Date when started—1926.
 (b) Capital invested—Rs. 100.
 (c) Mode of working—Hand industry.
 (d) Output—Full size match—8,000.
 (e) Persons employed—Boys 5
 Adult 2

Besides, 4 families are said to be employed by them from time to time.

29. BOX SUPPLIER COMPANY, Belgachia.

(a) Capital invested—Rs. 500.

(b) Mode of working—Hand work.

(c) Output—20,000 boxes.

(d) Persons employed—Boys	20
Adult	12
Female	8

Besides, 40 families are said to be employed by them from time to time.

30. SHEIKH SAID'S FACTORY, Kangal Mudies House, Belgachia.

(a) Date when started—1925.

(b) Capital invested—Rs. 200.

(c) Mode of working—Home industry.

(d) Output—15,000 boxes.

(e) Persons employed—Boys 25

Adult	Proprietor himself.
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Besides, 15 families are said to be employed by them from time to time.

31. SHEIKH GAFFUR MIA'S FACTORY, Belgachia.

(a) Capital invested—Rs. 2,000.

(b) Mode of working—Hand work.

(c) Output—30,000 boxes.

(d) Persons employed—Boys	20
Adult	8
Female	5

Besides, 50 families are said to be employed by them from time to time.

32. SHEIKH NOOR MUHAMMAD'S BOX FACTORY, Belgachia.

(a) Capital invested—Rs. 1,000.

(b) Mode of working—Hand work.

(c) Output—25,000 boxes per day.

(d) Persons employed—Boys	25
Adult	12
Female	8

Besides, 40 families are said to be employed by them from time to time.

33. BANGIA DIASALAI KARJALOYA, 69, Belgachia Road, Calcutta.

(a) Date when started—1925.

(b) Capital invested—Rs. 4,000.

(c) Mode of working—On factory scale.

(d) Output—600 gross box veneer and 8 mds. splints.

(e) Persons employed—Boys	2
Adult	10

(2) Letter No. 2027 D. I. (G.), from Mr. S. C. Mitter, Industrial Engineer, Director of Industries, Bengal, Calcutta, dated the 13th February, 1928, to the Tariff Board, Calcutta.

Herewith 4 copies of a note in which I have tried to show that the development of match industry on cottage lines is not only highly desirable in the best interests of the country but it is well within the range of practical politics. Kindly submit them to the President and members of the Board and request them kindly to go through it before my evidence is taken on the 15th instant.

Enclosure.

Supplementary report on the possibilities of the development of Match Industry on Cottage lines. By the Industrial Engineer, Bengal.

1. In my report on the possibilities of Match Industry on cottage lines in Bengal I have tried to show that the home industry system of manufacture of matches is the only system that can be adopted by the children of the soil and can benefit them. We have here a powerful Trust, which aim at controlling the Match Industry of the world, with practically unlimited resources and accumulated experience and I do not think Indian enterprise with their limited capital and limited experience will be able to withstand their competition at least for a few years to come. If the industry is allowed to be developed on a large factory scale, I have no doubt that the Indian factories will sooner or later be completely wiped off and the Trust will have the monopoly of the Match trade in India. The evil effects of monopoly may be eliminated to a certain extent if it is properly regulated by Government and "from a purely financial point of view it might be considered a good proposition to hand over the monopoly both of manufacture and sale of matches in India to this Trust on payment of an annual sum to Government" as has been proposed by the Indian Tariff Board in their letter on the subject to all chambers of Commerce and commercial organisations in the country but I do not at all agree with the view that "on grounds of sentiments alone that such a proposal affords no practical solution of the problem". I object to the handing over of the monopoly to the Swedish Trust, not on sentimental grounds, but because it affects a vital question that cry for solution in our country. I have intimate knowledge of the condition of Indian hearth and home, I know very well the acute distress in the country on account of unemployment especially among the middle classes, I know how Indians with too little land to occupy them fully and provide food for their family are silently suffering from poverty and starvation and find no occupation to supplement their income during their forced idleness. This unemployment and forced idleness and the acute economic distress that result therefrom appear to me to be one of the greatest problem of the day and the reason of my supporting the system of manufacture of matches on the lines described by me later, is that it can provide whole-time and part-time employment to a very large number of people. Old men, women and children, who are not fit for work in any other class of factory can be engaged in match industry and in case of the middle class people, whose social position stands in their way of living by manual work, match industry can provide them work in the seclusion of their home. I do not say that the development of match industry on the lines advocated by me, will solve the unemployment problem all at once, but there is no doubt about the fact that it can relieve the tension to a considerable extent and that is no mean advantage. Besides, the home industry system of manufacture of matches is not really very uneconomical and if it is adopted, I believe it will not affect the Government revenue from this source or the interests of the consumers and so there is no reason why Government should not support it.

2. Let me first take the case of the consumers. I have stated in my Report on the "Possibilities of the Match Industry on Cottage lines" which is already before the Tariff Board that the cost of production in the home industry system of manufacture of matches varies from Rs. 1-2-0 to Rs. 1-4-0 per gross and whatever the representatives of small factories may now say to escape excise duty I know this figure to be correct. I verified this figure to my entire satisfaction by personal inspection of a large number of factories. I have seen the statements of works cost per gross of matches submitted to the Tariff Board by the large scale factories run by up-to-date power driven machinery and it does not appear that their cost of production is less than that of the cottage workers. In para. 6 sub-para. (c) and (d) of my Report, I have shown that if Government assist the cottage workers with cheap supply of splints and veneers (they at present obtain their supply from large factories) and arrange for the supply of chemicals,

papers, etc., it will effect further reduction in their cost of production. Besides if they get standard quality of chemicals and follow a standard formula, they will be able to improve the quality of their matches.

3. The home industry system of manufacture of matches as advocated by me, is not a new untried system. As a matter of fact, it is followed successfully in Japan, which has developed a large export trade in matches as also in many of the large factories in India. Splints and veneers form nearly half the cost of production of matches and I have suggested the use of up-to-date power driven machinery for their manufacture on a large scale. Chemicals, papers, etc., form a good proportion of the other half of the cost of production and I have suggested to make them available to the cottage workers in small quantity at wholesale rates and thus provide them with the same advantage with regard to the supply of raw materials as the large factories have.

DEFINITION OF HOME INDUSTRY.

4. The type of factory that I advocate will be those that will purchase ready made splints and veneers, obtain chemicals, papers, etc., at wholesale rate from a Sale Depot either Co-operative or Government and have a production of not more than 100 gross a day. They will use only hand machines for frame filling and other processes, viz., paraffining, dipping into chemicals, Box-filling, Box pasting, wrapping of paper in and out, pasting of labels, dozen packing, etc., will be done entirely by hand which can be carried out by workmen, not only inside the factory but also by people, in their respective houses, who, on account of socio economic traditions and other causes, cannot come out of their houses to work as day labourer.

5. The labour charges for the above processes in the home industry system amounts to nearly 6 annas per gross, i.e., nearly one third of the entire cost of production. If up-to-date power machines are used for the above processes and even if it effect 50 per cent. saving the total difference between the home industry system of manufacture, as advocated by me and the large scale production will be As. 3 per gross. But it has to be considered that large factories have to pay heavy interest on large capital, blocked in building and machinery, taxes, insurances, repairs, depreciation charges and charges for expert supervision, which form no insignificant part of the cost of production and in this respect the small factories have advantage over them. It is generally held by the match manufacturers that cottage workers can produce matches at a lower price than that of the large factories and as a matter of fact they are selling their products at a much cheaper rate in the market. The President of the Indian Match Manufacturers' Association also stated in his introductory note on "Match Industry in Danger" that "The Cottage industries, using local wood and local labour can produce matches at a lower price than the factories, *Indian or foreign*". It may however be argued that though the price of the products of cottage industries may not compare unfavourably with that of the large scale factories, the quality of their products will be much inferior. This is also not true. I am advocating for a definite type of small factory, using fresh white splints (and not rejected splints) and working with hand machines for frame filling like that of the Bangiya Diasalye Karjalaya at Ultadingi Road, Calcutta, which I have shown to the President and members of the Tariff Board. I have seen the samples of their matches. I think the get-up of their products is quite good and does not compare unfavourably with that of the large factories established here. The chemical portion of their matches may not be very satisfactory as the chemicals, they purchase from the retailers in the market are not of standard qualities though they have to pay a very high price for them. If arrangements are made for the supply of good chemicals at wholesale rates and they follow a standard formula for the manufacture of damp-proof matches, such as the one evolved by the Department of Industries, Bengal, they can produce high class matches and that, without any appreciable increase in the cost of production. So it is abundantly clear that if the match industry is developed on the lines as

suggested by me the matches that will be produced will not compare unfavourably either in price or in quality with that of the products of large scale factories and so the consumers will not suffer in any way.

6. If the cost of production in both the system be almost the same, Government revenue cannot be affected if the industry is developed on the lines advocated by me. If it be decided to levy any excise duty, it can very well be imposed on the products of the small scale manufacturers and as regards the collection of the duty, such arrangement may be made that there will be no difficulty whatsoever.

7. So it appears that if the industry is developed on cottage lines, as advocated by me, consumers will not suffer and the Government revenue will not be affected and as such there can be no objection to the adoption of this system. The advantages of which have been thoroughly discussed in my previous report and it has been shown that it cannot only provide employment to a large number of men in this time of unemployment and acute economic distress in the country, which in itself is a sufficient cause for supporting it but it is the only system that can benefit the children of the soil and effectively prevent the undesirable from getting hold of this industry.

8. The Match industry in India is still in its infancy and I think Government may shape its destiny in any way they like. If the Government accept the principle underlying my proposal to develop the industry on cottage lines, I suggest that following steps be taken to make it a practical proposition.

I. The present import duty on matches be declared to be protective and the duty be enhanced from Rs. 1-8-0 to Rs. 3 per gross with a view to stop the importation of matches as far as possible.

The present retail price of imported Swedish matches is 1½ pice per box. If the duty is enhanced to Rs. 3 per gross, the retail price will be 2 pice per box, i.e., the increase in price will be only ½ pice per box. It is presumed that at least one third of the people, who can now afford to purchase imported matches at 1½ pice per box will also be to purchase it at 2 pice per box and as the rate of the duty will be double Government will not at present on all probability lose more than one third of the Customs revenue on matches. The match industry in the country will however be gainer as the reduction in the importation of matches will provide further scope for its development.

II. The loss in Customs revenue from matches be made up by the imposition of excise duty on matches manufactured in the country.

(a) I suggest that an excise duty of Rs. 1-2-0 per gross or ½ pice per box be imposed on the products of those factories, the output of which is over 1,000 gross per day or 280 thousand gross per annum (Taking 280 working days per annum).

The products of these factories are at present selling in the market at 1 pice per box. The result of the excise duty will be that they have to sell their products at 1½ pice per box. They will find market amongst those people that used to purchase imported matches at 1½ pice per boxes but would not be able to do so as the price of the imported matches would be enhanced to 2 pice per box.

(b) An excise duty of As. 4 per gross should be levied, on the products of the factories producing 100 to 1,000 gross of matches per day. I think this duty will not affect the sale of their products at 1 pice per box.

(c) Cottage workers producing less than 100 gross per day should be exempted from paying any excise duty for at least five years just to help them to consolidate their position.

III. Factories producing 100 gross of matches per day should be registered and should be under license. They should not be allowed to produce more than what they have now stated to be their output and no increased output

will be sanctioned when fresh license should be issued. This will help the further development of the industry on cottage lines.

IV. Those factories that will not be under license (*i.e.*, those whose outturn will be less than 100 gross per day) will not be allowed to manufacture splints and veneers. The factories that will be under license will be allowed to manufacture splints and veneers only to the extent that they require. Their excess production of splints and veneers can be sold to Government only but the Government will not be bound to purchase it.

V. Government should arrange to supply splints and veneers to cottage workers and small factories. The demand can be met partly by starting suitable factories at forest sites and partly by obtaining supplies from the surplus production of the existing factories. If any of the large factories fail to stand the competition on account of the policy of Government to develop the industry on cottage lines, it need not close down its business entirely. It can be converted into splints and veneer making factory.

If the factories are put under license and the cottage workers are made dependant upon Government for the supply of splints and veneers, the industry will be under the complete control of Government. Over production can be easily prevented and if it be necessary to levy an excise duty on the products of cottage industries also, there will be no difficulty whatsoever and no agency will be required to collect the duty. All that has to be done is to increase the price of the quantity of splints necessary to produce one gross boxes of matches by the amount of the duty that Government may want to impose per gross.

VI. Government should organise a depot for the supply of chemicals of standard quality, papers, etc., in small quantities at wholesale rates to the cottage workers and small factories as suggested in my previous note and efforts should be made to induce the cottage workers to adopt a standard formula to ensure the good quality of their products.

VII. The factories under license should be made to maintain a cost chart and a chart showing the selling price of matches.

9. It is said that "the Swedish Trust has at its command exceedingly large capital resources and faced with the prospects of closing its factories as a result of the excise duty it may resolve to initiate a price war regardless of cost". I do not think there will be any such danger, if my scheme be adopted. If the factories of the Trust are put under license and are not allowed to produce more than what they have now stated to be their output, they cannot control the market. However, they may reduce the price so long there will be no over production, other factories will not be affected. Besides, there can be no incentive to initiate a price war if they know that they cannot expand their business to profit by it later.

10. Now if the above scheme is accepted it is to be considered what will be its effects upon—

- (1) the consumers,
- (2) Government, and
- (3) the existing factories.

CONSUMERS.

The general consumers will not at all be affected. They will obtain their matches at the very same price at which they are buying at present. Only a very few people who will not purchase cheap matches available in the country and will insist on having imported matches inspite of the imposition of prohibitive duty to stop the importation will have to purchase it at 2 pice instead of the present rate of $1\frac{1}{2}$ pice per box. They are a few upper class people, who can very well afford to pay extra $\frac{1}{2}$ pice per box and so we need not take any serious notice about it. The really poor people however will be greatly benefited if the industry is developed on cottage lines. In my previous report I have spoken of another class of matches made of rejected splints that are selling in the Calcutta market places and in mofassil 'hats'

not in boxes but as loose sticks as is the custom in Japan. Some 200 or 300 match sticks, *i.e.*, contents of 2 or 3 boxes are available for one pice. With the growth of the match industry, more rejected splints will be available and so the supply will be greater. Those who are really poor can use this cheap stuff.

GOVERNMENT REVENUE.

If my scheme is accepted I believe, from the revenue point of view, Government will be gainer. The Customs revenue from matches may be reduced to some extent but it will very well be compensated by the excise duty, I have suggested and I should not be surprised if the total revenue from matches (Customs duty as well as Excise duty) come up to the high figure of 1922-23. Besides the development of the match industry in the country will bring in more revenue to the coffers of Government in other ways. It will effect an increase in the importation of chemicals and papers and will considerably increase forest revenue.

PROSPECT OF THE EXISTING FACTORIES.

If my scheme is accepted I do not think it will seriously affect any of the existing factories. In my previous report, I have shown that the imposition of Excise duty of As. 4 per gross will not affect the retail sale of matches at 1 pice per box and so the factories producing less than 1,000 gross per day will be quite safe. In case of factories producing more than 1,000 gross per day, I have suggested the imposition of a duty of Rs. 1-2-0 per gross or $\frac{1}{2}$ pice per box and I fully realise that its effect will be that they will have to sell their products at $\frac{1}{2}$ pice per box. It appears from the statement of seaborne trade of British India that 7,928,522 gross of matches are still imported into India and on enquiry in the market, I understand that imported matches are selling at $1\frac{1}{2}$ pice per box. I have suggested a prohibitive duty of Rs. 3 per gross on imported matches and it is hoped that it will effect a considerable reduction in the importation of matches and will thus afford scope for the large factories to capture the market so long dominated by the imported matches. If the small factories can pay As. 4 per gross as excise duty and still sell their products at 1 pice per box, the large factories can spend As. 4 per gross to improve the quality of their matches as the duty of $\frac{1}{2}$ pice per box (or Rs. 1-2-0 per gross) that I have suggested will not affect their margin of profit if they sell their products at $1\frac{1}{2}$ pice per box. Foreign capital has been invested only in large factories and I should like to create such a situation that they cannot compete with the small factories and in their struggle for existence their products will have to compete with matches imported from foreign countries which the factories run with foreign capital want to avoid for obvious reasons. There are of course some Indian factories whose outturn is more than 1,000 gross per day. I think they will be able to stand the competition if they can improve the quality of their matches for which I have provided for them As. 4 per gross in my scheme. If any factory fail to stand the competition it will be converted into splints and veneer factory. Even if my scheme affect the interest of a few large Indian factories, it should not stand in our way if we take into consideration the larger interest of the country that it will serve.

II. So it appears that the development of match industry on cottage lines is, not only highly desirable in the best interest of the country, but it is very well within the range of practical politics and as such I hope my proposals will receive the earnest consideration of the Tariff Board and the Government.

S. C. MITTER,

Industrial Engineer, Bengal.

P.S.—I understand that in their recent evidence before the Tariff Board, the representatives of the small match factories run on cottage lines, have challenged my statement that their cost of production varies from Rs. 1-2-0

to Rs. 1-4-0 per gross. As a matter of fact these are the very people who gave me the above figure a year ago which I verified to be correct by personal inspection of a very large number of factories. They seem to be under the impression that Government will impose some excise duty and they think that if they can show that their cost of production is higher than that of the large factories, they will get proportionate relief and this is why they are anxious to submit an exaggerated figure of their cost of production. However on enquiry in the market I have just come to know that the wholesale price of their product is Rs. 1-6-0 to Rs. 1-8-0 per gross and that of the large power driven factories is from Rs. 1-8-0 to Rs. 1-10-0 per gross. If they can sell their products at Rs. 1-6-0 per gross it is obvious that their cost of production cannot be higher than Rs. 1-2-0 to Rs. 1-4-0 per gross as stated by me.

S. C. MITTER.



**Oral evidence of Mr. A. T. WESTON, Director of Industries,
Bengal, and Mr. S. C. MITTER, Industrial Engineer,
Bengal, recorded at Calcutta on Wednesday,
the 15th February, 1928.**

Introductory.

President.—Mr. Weston, are you the Director of Industries, Bengal?

Mr. Weston.—Yes.

President.—Mr. Mitter, what is your official position?

Mr. Mitter.—I am the Industrial Engineer attached to the Department of Industries, Bengal.

President.—How long have you been in this office?

Mr. Mitter.—Since October, 1925.

President.—What are your qualifications?

Mr. Mitter.—I am a Mechanical Engineer graduated from the University of London. I took my apprentice training in Messrs. Ruston and Hornsby Lincolnshire in England and then I came back to India.

President.—You are a general Mechanical Engineer?

Mr. Mitter.—Yes.

President.—Have you had any training in match manufacture?

Mr. Mitter.—No.

President.—Mr. Weston, am I to understand that these two representations that we have received from your Department represent the views of the Department?

Mr. Weston.—No.

President.—Are they Mr. Mitter's personal views?

Mr. Weston.—Yes.

President.—It is rather awkward, when we are dealing with a Department, that we have to consider the personal views of an officer working in that department. We should be very glad to have Mr. Mitter's personal views. Here we are examining the Department and we would like to have the views of the Department. As a matter of fact where Government Departments are concerned, we don't take the personal views of the highest Government officials unless they are prepared to come forward as ordinary witnesses.

Mr. Weston.—If you asked for the views of the Department, I could not do that without submitting them through the Secretary to the Government of Bengal.

President.—Not necessarily! I don't mean the Government views, I mean the views of the Department itself. That would not commit the Government to any policy. There is a distinction. For instance, we had the Railway Board before us which gave its own views. Its officers give their own views as the views of the Railway Board and not as the views of the Government of India. In that sense I wish to know whether your Department has any views on this subject apart from Mr. Mitter's views.

Mr. Weston.—I suppose the Department would speak through me as Director and I have accumulated considerable opinion about this.

President.—The procedure we propose to follow is this. We will examine Mr. Weston as representing the Department and Mr. Mitter from his own personal point of view.

Ms. Weston.—Mr. Mitter is my Assistant who has given particular attention to the match industry round Calcutta run mostly on cottage lines and it is in that respect that he has put forward those two papers thus crystallising his own observations and experience.

President.—Mr. Mitter has written two very exhaustive notes and we shall have to examine him on some of the points raised therein.

Mr. Mathias.—You send the first note under cover of a demi-official letter in which you don't state whether it has been accepted by the Industries Department or not.

Mr. Weston.—It has not been accepted by the Industries Department.

Mr. Mathias.—The reason why I ask is because I was not sure from your demi-official letter.

Mr. Weston.—The notes before you must not certainly be considered as containing the considered opinions of the Department of Industries.

President.—Have you read Mr. Mitter's notes?

Mr. Weston.—I have.

Mr. Mitter's views.

President.—Mr. Mitter's views appear to be that this industry requires entire reorganization in so far as matches are manufactured by machinery and that if the industry is converted on the cottage industry basis, it would be beneficial to the people.

Mr. Mitter.—Yes.

President.—That is to say, the industry is proceeding wrongly from your point of view and it must be split up into small factories such as those we saw and it would be to the economic good of India, if that was done.

Mr. Mitter.—Yes.

President.—I will take two or three of these points as they arise out of these notes. Your contention is also this, that at present the costs of the cottage factories are about the same as those of the larger factories and that if there is any difference, it does not matter. Is that right?

Mr. Mitter.—Yes.

President.—Then, you make certain proposals as to how to foster this cottage industry, so that gradually all the big factories die out and the imported matches is taken by the cottage factories.

Mr. Mitter.—Here the big factories do not die out.

President.—Who dies out then?

Mr. Mitter.—Nobody dies out except the importation of foreign matches.

President.—As soon as the importation of matches dies out, the place of whole demand of the country is supplied by these cottage factories.

Mr. Mitter.—No, by the products of the big, up to date power driven factories.

President.—What part of the production goes to the cottage factories in that case? Let us be clear as to what we mean. At present the demand of the country may be estimated at about 17 million gross, of which 14 million gross are already being manufactured, as far as I can see, by the local factories excluding cottage factories. The factories are equipped for the production of 18 million gross. The imports are 3 million gross. So that pretty nearly the country is equipped for all its production and therefore there is not much room for expansion if the cottage industry wishes to expand. On the present figures it must expand at the expense of the larger factories, that is the position. That being so, it necessarily follows that the larger factories must give way to the smaller factories if the smaller factories are to expand. We will assume that all the imports vanish. Then, if the smaller factories are to expand they can only expand at the expense of the larger factories established in India.

Mr. Mitter.—What I say is that the market for the imported matches will be taken over by the products of the big factories.

President.—What is the market? I have just given you the figures.

Mr. Mitter.—Whatever the importation might be that is now going on! Those matches that are now selling at 1½ pice per box will be replaced by

the products of the big factories and the matches which are now selling at 1 pice will be taken over by the products of the cottage factories.

President.—You can't take over like that.

Mr. Mitter.—There will be some big factories which will have no market and those factories will eventually have to be converted into splint and veneer making factories.

President.—Why?

Mr. Mitter.—I have assumed this factor that the development of this industry, if it is to be for the best interests of the country, should be on the lines of the cottage industry.

President.—That is just my point. Your view is that the development of the industry should take place on the cottage industry lines and therefore the bigger factories must eventually vanish. If that is your contention, the logical conclusion must be that. You cannot draw any line in the middle.

Mr. Weston.—That presupposes that the capacity of the existing, organised large factories is equivalent to India's needs.

President.—Yes. I think these are the main points. Then, you make certain subsidiary proposals in order to promote the cottage industry.

Mr. Mitter.—Yes.

Mr. Weston's views.

President.—Mr. Weston, you have heard Mr. Mitter's views and I would like to know how far the Department is in agreement with those views.

Mr. Weston.—The Department of Industries main objective is of course to foster, and encourage the development of Indian industries in the interests of India's own people and therefore when my young assistant here comes forward with this very laudable object, I naturally give him all the possible sympathy and scope that I can, in order to see that if there is any real substance in his claims and to ensure that they shall receive due consideration. I myself have had considerable experience in factory management and organisation—not exactly in the manufacture of matches but I have had experience of mass production methods—and I could not support for one moment the idea that given a free field the Cottage Industries could expand at the expense of the larger factories.

President.—That is one point. You are talking of what may happen in open competition. But the other point that Mr. Mitter is making is that the cottage industry must be fostered and that it ought to be fostered and that if it is fostered, it will be to the economic good of India. What is your view about that as Director of Industries?

Mr. Weston.—Of course as a matter of policy in the direction in which Mr. Mitter's sympathies lie, the responsibility for that direction will have to be taken outside the Department and I could not take that responsibility. I take this responsibility and I would say that the interests of India could be secured as well by the establishment of larger organised match manufacturing concerns—in fact better in the long run than those interests could be secured by the fostering of small, detached and in practice very crude and sweated cottage industries.

Mr. Mathias.—When you refer to the interests of India, you refer to the economic interests, don't you?

Mr. Weston.—Yes, that is to say India is a tremendous market; all people require matches and India's resources in material are ample to supply those requirements. That is my firm conviction.

Dr. Matthai.—It really comes to this, Mr. Weston, that from the economic point of view you don't consider that there is any case for encouraging cottage match factories.

Mr. Weston.—No.

Dr. Matthai.—It practically comes to that?

Mr. Weston.—Yes, from my experience.

Dr. Matthai.—Is there any kind of ground, apart from that, on which you would try to establish a case for encouraging cottage match factories?

Mr. Weston.—No, I am very sorry but I cannot adduce any additional matter. With my long experience and knowledge of this case I could not support a proposition that we should in any way back cottage industries on the scale just described as against larger factories. My policy would be to encourage my Indian brethren and colleagues to do all they could to establish the organised factory match industry by Indian management and technical ability on adequate lines, and I think with the full co-operation of Government departments like the Forest Department more in that direction could be done. I should suggest to you from my experience that the Forest Department has never yet placed all its resources at the disposal of this industry.

President.—They have themselves admitted that. They have not had the chance of doing so.

Dr. Matthai.—I should like to know the experience of your Department. I take it that in Bengal since the duty was raised to Rs. 1-8-0 there has been a very considerable development of cottage match factories.

Mr. Weston.—Speaking generally, yes.

Dr. Matthai.—And the experience of your Department has also been that more recently cottage factories have been disappearing?

Mr. Weston.—Yes, most certainly.

Dr. Matthai.—In the light of the opinion expressed a little while ago the disappearance of these cottage factories is on the whole a healthy movement; at any rate no serious interest of the country is injured by the disappearance of these cottage factories?

Mr. Weston.—I don't think so.

Cottage Industries.

President.—We must first understand what is meant by cottage industries. *Mr. Mitter*, we went out together to see these cottage industries, didn't we?

Mr. Mitter.—Yes.

President.—The impression that these cottage industries that we saw left in my mind was this—you may correct me if I am wrong—that splints and veneers were manufactured in the ordinary way by machinery by one man in one place and then the splints and veneers were taken by the same man to another place where he had certain appliances such as frames, dipping frames and so on where he employed a number of people to finish the splints and the boxes. Then, the same man disposed of the finished boxes either himself or through his agents, is that correct?

Mr. Mitter.—Yes, that is what you have actually seen.

President.—I also asked you whether any manufacture was carried on as a home industry by which I meant this that a family or so who had nothing much to do during the day thought that they would like to add to their income and would like to get a few splints and veneers for boxes—ready-made—and take these to their homes, buy the necessary chemicals, paper and other things required, and then finish the splints and veneers and sell them outside without the interference of a middleman. I understood you to say that there was not any case of that kind.

Mr. Mitter.—Not of the type you are now describing.

President.—Now that is the kind of industry where poor, respectable people who cannot go and seek employment outside as labourers might well make a little money by doing this work at home. That is not the case so far as this industry is concerned. All the cases that you have given in your first note are of the first type that I described; that is to say they were employed by some man who was interested in splints and veneers and who distributed these splints and veneers to those people who took them home and brought them finished back to the factory and this middleman really was

running a small factory. Instead of running it under one roof, he was running it under two or three different roofs. When you say that you want to foster the cottage industry, are these the lines on which you want the industry to develop?

Mr. Mitter.—My suggestion was this that some of the operations now carried on inside the factory building could be very easily done by people at home.

President.—Which operations do you mean?

Mr. Mitter.—Levelling, filling, box making and so on.

President.—They can be done and at present they are being done.

Mr. Mitter.—They are being carried on by people in their homes, but they are doing these for the middlemen.

President.—What advantage has that got? If you ask these people to go to the factories, they will get their wages and will work in the ordinary way, but you want to substitute for that sort of labour a sort of irregular labour working in their homes. That is what you are doing.

Mr. Mitter.—Yes.

President.—I should like to understand in what way would that be an improvement in the condition of labour? You would be taking away work from 100 people who get more wages and substituting in their place 500 men who would work about 2 hours a day and get less wages.

Mr. Mitter.—My idea is that there are not many people in Bengal, at least amongst the unemployed, who would like to leave their houses and would like to go and work in big factories. That is the reason why I suggest this.

President.—Have you any idea as to how much employment you can give.

Mr. Mitter.—I should say a fairly large number.

President.—Could you give me any idea?

Mr. Mitter.—About one-third.

President.—Do you mean one-third of the population?

Mr. Mitter.—About one-third of the unemployed men.

President.—What do you estimate the number at?

Mr. Mitter.—It is nearly a year since I went through the Unemployment Committee's Report.

President.—Would it be 200,000 or 500,000?

Mr. Mitter.—It would not be so much as that. It is very difficult for me to give you an idea.

President.—What sort of youngmen are you thinking of?

Mr. Mitter.—Some of them have just passed the matriculation examination and some of them have passed the I.A. or I.Sc. examination.

President.—Do you think that they would sit and work for ten hours a day?

Mr. Mitter.—Not 10 hours a day.

President.—I am showing you how much a man can earn in a day or in a month. Do you mean to suggest that this educated labour would seriously work under those conditions?

Mr. Mitter.—I should think so.

Dr. Matthai.—Your idea really comes to this that you would take employment from the hands of the labouring classes and give it to middleclass young men.

Mr. Mitter.—No.

Dr. Matthai.—That is what it really comes to.

Mr. Mitter.—I am not taking away the employment from anybody. What I do say is that the number of people actually required, provided a scheme like this is adopted, will not be found in Bengal. We will want additional labour.

Dr. Matthai.—If you had a development of the factory system, that would provide employment for the lowest classes of the community and if you had a development of cottage factories, you might find employment for the middle-class. What your suggestion comes to is that the movement in one direction might be checked in order that the movement in the other direction might be encouraged.

Mr. Mitter.—If you use only first class machines, the number of operatives required will be less. But if all the operations that are now carried on by machine are to be done by hand, then the number of hands required will be more.

President.—*Mr. Mitter*, supposing you applied that principle to many other industries, I daresay the population of India can dispense with a considerable amount of machinery.

Mr. Mitter.—It is not practicable in the case of other industries but it is practicable from the point of view of the Match industry because my contention is that the cost of production with or without machinery is almost the same.

President.—Take the sewing machines. If you don't allow the use of sewing machines, it will be possible to provide employment for 20 people where one machine is used now. It is a thing which can be done at home. Any student who can find a little time can do that. In the same way typewriters can be dispensed with. If you really carry your proposal to its logical conclusion it simply means this that wherever you can dispense with machinery you can do so in order to provide employment for more people in the country.

Mr. Mitter.—Not necessarily.

President.—I have given you these two instances. To give you one more instance, why have rotary presses?

Mr. Mitter.—In the case of typewriting, it is a question of time. For instance, the reporter is taking down notes. We know that this work can't be done by hand. But in the case of the Match industry, that is not the case.

President.—I am just trying to show that there are many spheres of life where you can employ human labour and dispense with small machines.

Mr. Mathias.—*Mr. Weston*, are you aware of the conditions in the tailoring business in, say, London perhaps about 20 years ago?

Mr. Weston.—Yes.

Mr. Mathias.—There was a good deal of this home industry very much on the lines which *Mr. Mitter* suggests in regard to the cottage industry, that is to say, the tailors in the West End let out the finishing and sewing of clothes, usually to female labour. You remember that there was a good deal of interest taken in the matter and the general conclusion was that the "sweating" in that industry was tremendous.

Mr. Weston.—Yes, indescribably bad.

Mr. Mathias.—The conditions of labour were very bad in that industry.

Mr. Weston.—Yes.

Mr. Mathias.—So that, speaking generally without having a very strong trades union or some authority which will impose proper labour conditions, you would find that a home industry of that type would not conduce to the welfare of labour?

Mr. Weston.—Yes, every time. I am of the opinion that that type of unorganised, detached, individual operative home industry subsidiary to some central employer or organization, is woefully weak economically and ultimately results, under the competitive system of industries which we have developed to-day, in the home industry going to the wall or as nearly to that as possible and it becomes a sweated industry.

Mr. Mathias.—That is peculiarly applicable to large towns like Calcutta?

Mr. Weston.—Certainly.

President.—I have gone very carefully through your first note and as far as I can see, taking the first 19 factories given there, their daily output comes to 1,050 gross per day and according to the figures that you have given the total number of persons employed is 712 roughly besides 504 families. If you just look at it, it means that there is less than one gross available for each family and each person.

Mr. Mitter.—May I point out that these figures are probably not correct? I have only given the figures supplied to me.

President.—I am only pointing out to you, lest you might have formed your judgment on these figures, that the remuneration for all the labour employed according to your own figures is probably 6 annas. That would mean a very hard day's work, to do a complete gross a day for six annas, and I doubt very much whether the industry can afford to pay as much as six annas for your labour under economic conditions.

Mr. Weston.—Per gross?

President.—Yes. So that the amount of unemployment that you can cure will be very small and it would be under far more arduous conditions than if they sought employment elsewhere. Don't you agree that that would be the case if these figures are accepted?

Mr. Mitter.—Provided these figures are correct!

President.—I do not know whether the figures are correct or not.

Mr. Weston.—There are no means of checking whether these figures are correct or not.

Mr. Mitter.—Neither can I say that these figures are absolutely correct.

President.—You put forward these figures on which very much of your argument is based, and if these figures are not reasonably correct, it is very difficult to base any argument on them. What do you expect me to do? Am I to accept these figures? Then, there is an end of it.

Dr. Matthai.—How exactly were these figures collected?

Mr. Mitter.—I went round myself to the different manufacturers and asked them how many people they were employing. Take for instance factory No. 4 —R. N. Match Factory. They said they employed 10 adults, 8 females and 12 boys. When they employed these men, they did not employ any of labour but when they could not get these men inside the factory, they employed outside labour.

Dr. Matthai.—Personally you are not at all satisfied that these figures are reasonably accurate?

Mr. Mitter.—Their explanation was that when they could get labour inside their own workshops, they did not employ any outside families, but when there was a dearth of labour, they sent their work outside.

Dr. Matthai.—Having done this survey such as it is, what is the impression that you have formed? Are these factories generally run on the basis that the man who owns the factory and runs it as far as possible employs the labour of his own joint family and it is only in rare cases that people from outside are brought in on a wage basis? Would that be a correct inference?

Mr. Mitter.—When the output is more than 100 gross a day, he has to employ outside labour.

Dr. Matthai.—The factories that you showed us in our visits recently at least do not correspond to that impression?

Mr. Mitter.—Quite right.

Dr. Matthai.—But in your survey on which you base these notes, did you get any different impression?

Mr. Mitter.—I did get, but I can't exactly remember what it was because it is about a year old.

President.—It is a pity we have not been able to find any of these factories, nor have you been able to find them for us. They don't exist apparently.

Mr. Mitter.—They did exist at the time I made this survey and they might have disappeared now.

President.—But at present you don't think that they exist, do you?

Mr. Mitter.—I don't know either way, because after the 10th February 1927, I had never been to these factories.

Mr. Mathias.—Have you any information on this subject as to whether there does exist anything in the nature of joint family match manufacture?

Mr. Mitter.—No. But I did visit one in Comilla four years ago where Dr. Nandi's machines were first developed and there in a factory house under a joint family system they were cutting up splints and veneers under a hand chopping arrangement. That factory has disappeared.

Mr. Mathias.—That is the only one of which you have any knowledge?

Mr. Mitter.—That is one that I know of, which has been brought to our notice as a Department.

President.—You have given us some cost figures in paragraph 2 of your first note. I don't understand your figure of Rs. 1-2-3 which you say is the cost of factories working entirely by hand.

Mr. Mitter.—Yes, including frame filling: that is to say they distribute these wooden frames to these houses.

President.—And they ill the frames by hand and return them?

Mr. Mitter.—Yes.

President.—Do you know how much a frame contains?

Mr. Mitter.—I do not know.

President.—It will take a very long time to do it. The other day I enquired and I was told that one frame in a full size factory contained about 33 boxes. If you multiply that by 80, it would give you the number of splints.

Mr. Mitter.—Yes.

President.—So, I say that it would take a long time.

Mr. Mitter.—That is the reason why I suggest that factories using frame filling machines should be taken as standard factories.

President.—You would have frame filling machines.

Mr. Mitter.—Yes, that is what I have suggested.

President.—This cost which you have given for frame filling, where did you get this from?

Mr. Mitter.—From Mr. Ghose of the Bangiya Diasalai Karjalaya.

President.—I think his figures are absolutely different.

Mr. Mitter.—These are the figures given to me by him.

President.—We examined him only the other day. His costs are—

	Rs. A. P.
Excluding depreciation	1 3 9
Including depreciation	1 4 4½
Including profits	1 5 1½

Mr. Mitter.—Perhaps those are his latest figures.

President.—If you take Rs. 1-2-0 . . .

Mr. Mitter.—It varies from Rs. 1-2-0 to Rs. 1-4-0.

President.—If you take them at Rs. 1-4-0, the Swedish Company's costs as they have given us so far without anything being included for profit, come to Rs. 1-3-11. To that they have to add certain charges which bring the price to Rs. 1-10-0 and their selling price to-day is Rs. 1-12-0, so that if these men produce matches at Rs. 1-2-0, there is a margin of 10 annas a gross.

Mr. Mitter.—It varies from Rs. 1-2-0 to Rs. 1-4-0.

President.—We will assume a price of Rs. 1-4-0. The Swedish matches sell at Rs. 1-12-0, but the bigger factories are selling at Rs. 1-10-0. So that if your figures are accepted as correct, there is a big margin.

Mr. Mitter.—Provided the existing conditions continue.

President.—I am talking of the present moment. So that, in fact, the bigger factories on these figures will require protection against cottage factories.

Mr. Mitter.—Yes.

President.—What is then your complaint? If your men can manufacture matches at Rs. 1-4-0 and if the selling price is Rs. 1-9-0 or Rs. 1-10-0 for Indian factories and Rs. 1-12-0 to Rs. 1-14-0 for the Swedish Match Company, there is a very big margin.

Mr. Mitter.—Two days ago I came across a man who is the selling agent of WIMCO matches. He is selling his matches at Rs. 1-8-0 to Rs. 1-9-0 per gross.

President.—We have received their selling price as Rs. 1-12-0 which includes all the charges. Probably he gets 3 annas off and so he may be selling at Rs. 1-9-0. Even so there is a margin of five annas, and you cannot say that a margin of five annas is a poor return on a small investment like that.

Mr. Weston.—One could not say that the big factories are crushing the small factories.

President.—Supposing I were to accept your figures as correct and if I found the lowest selling price was Rs. 1-9-0, and there was a margin of five annas, that ought to be sufficient to cover all the profits of the cottage factories.

Mr. Mitter.—There will be an occasion when big factories . . .

President.—We have not reached that stage.

Mr. Mitter.—I am assuming that stage. After having assumed that stage I have just drawn up this.

President.—Let us take the case of what might happen. You consider that Rs. 1-2-0 to Rs. 1-4-0 is their price without allowing for any profits. That is the factory cost.

Mr. Mitter.—Yes.

President.—What do you consider a fair profit?

Mr. Mitter.—Rs. 1-4-0 is the factory cost. I find that I have not allowed anything for the interest on the amount of money they have invested. Taking everything into consideration, labour, trouble, etc., I should say 2 to 2½ annas.

President.—That brings it to Rs. 1-6-0.

Mr. Mitter.—Say Rs. 1-7-0.

President.—And that must remain more or less as a permanent figure, is it not?

Mr. Mitter.—Yes.

President.—If the bigger factories manufacture their matches at Re. 1, then you suggest that some measures ought to be adopted by Government to enable the cottage industries to make good the difference of five annas or so. Is that not your point?

Mr. Mitter.—Yes.

President.—That is to say, Government must come to the rescue of the more expensive **manufacture**.

Mr. Mitter.—Yes.

President.—Indefinitely?

Mr. Mitter.—I say at least for some years to come.

President.—Can you suggest to me any directions in which you can satisfy the Government that if this extra five annas protection is given now, the industry would not require any more assistance?

Mr. Mitter.—Do you mean if they got sufficient protection for say 5 or 6 years?

President.—Supposing all foreign competition is shut out and the competition is between you and the larger factories and supposing the larger factories bring down their cost by say 4 or 5 annas below your cost, then what do you expect the Government to do?

Mr. Mitter.—I expect the Government to do what I have said here to assist the cottage workers by supplying them with cheap splints and veneers.

President.—How do you expect the Government to arrange for the cheap supply of splints? Do you mean cheaper supply?

Mr. Ghose's opinion.

Mr. Mitter.—The match factories are now paying 6 annas per gross. In the investigation report of Mr. A. P. Ghose I find that if a factory for manufacturing splints and veneers were established in the forests, then it would be possible to manufacture at 3 annas per gross.

President.—You are entitled to quote his figures but he has not appeared before us to satisfy us about those figures. We wrote to him twice to appear before us but he has declined to do so. I am afraid we cannot base any conclusions on what he has said and we are not prepared to accept any of his statements.

Mr. Mitter.—I can't help.

President.—We have no means of verifying whether what he has said is correct or not.

Mr. Mitter.—That is true.

President.—Unless Mr. Ghose satisfies us, we should not be prepared to accept any of his statements: in fact, it is not the practice of the Board to accept anybody's statements unless he comes forward and substantiates them. If your information is based on Mr. Ghose's opinion, unless you are prepared to bring Mr. Ghose here and satisfy us that what he has said is reasonably correct, I think it would be idle for us to discuss any further. If Mr. Ghose is your authority, I have nothing to say but if you are quoting Mr. Ghose before us, our answer is "we do not know Mr. Ghose".

Mr. Mitter.—Then, I cannot help.

President.—Unless you have formed any independent judgment! We should be very glad to have your own views—apart from what you have gathered from a perusal of Mr. Ghose's literature.

Mr. Mitter.—I have never had the opportunity of verifying Mr. Ghose's information. When Mr. Ghose was appointed by the Government of Bengal to investigate the question of the Match Industry in Bengal, I naturally had to place some amount of confidence on his figures.

President.—Has the Government of Bengal accepted Mr. Ghose's report?

Mr. Weston.—No. I am speaking from memory now.

President.—I have read through Mr. Ghose's reports. We are very much interested in ascertaining how he arrived at those results because the results, as far as we have seen in this enquiry which as you know has been going on now for some months, are entirely different from Mr. Ghose's. Here is the evidence of 30 factories. We have examined a good number of them. The actual experience has not borne out some of the statements of Mr. Ghose.

Mr. Weston.—I don't think that Mr. Ghose has said that the cottage industries could work in competition with the larger factories using modern machinery. What he has said is that "the use of modern machines and modern methods only can lead to success. There is room for very small and big factories and they can thrive side by side provided they are based and worked on proper lines". I accept the opinion that the use of modern machines and modern methods can alone lead to success. The Government of Bengal did not accept the truths of what Mr. Ghose said. What they said was "these are the facts placed before us by a gentleman who has some

experience and states that he is an expert. Can the Department of Industries now put up a proposition for the supply of splints and veneers?" That is where we are.

President.—I think that if you read all the evidence that we have collected, you will find that you have reason to alter some of the conclusions from such evidence.

Mr. Mitter.—I have gone through all the evidence. Mr. Banerji of the Muslim Match Factory in his evidence before the Tariff Board on Wednesday the 23rd March 1927, at Rangoon, says that in his factory which is quite big

President.—Is it a big one?

Mr. Mitter.—Yes, I think so.

President.—Have you seen it?

Mr. Mitter.—No.

President.—We have seen the factory and we don't consider it big.

Mr. Mitter.—Take the case of Adamjee's factory, which has a production of 6,000 gross a day. They say that all the operations except the splint and veneer cutting are done by hand.

President.—Therefore their costs are a little higher. We come back to the same point.

Mr. Mitter.—What I am driving at is that all the operations need not be carried on by machine.

President.—I concede at once that many of the operations which are now performed by machinery can be performed by hand. I don't dispute that proposition. My only point is that it is more expensive to employ labour where you can employ machinery. That is the only point where we differ. That is a very small matter.

Mr. Mitter.—The difference is not much: that is my conclusion.

Dr. Matthai.—That is one form of encouragement that you propose, is it not Mr. Mitter? Supposing hereafter the costs of these larger factories come down and the wholesale selling price also comes down as a result of that, in that case you would like the cottage factories to be supplied with splints and veneers under arrangement by Government at a lower price? What exactly is your idea? Should Government erect a factory and supply these splints and veneers?

A Government factory.

Mr. Mitter.—I suggest that Government should start a demonstration factory and after running it a few years make it over to a co-operative organisation which will be able to run it economically.

Dr. Matthai.—Are you familiar with the demonstration factory at Patna?

Mr. Mitter.—I have been there once.

Dr. Matthai.—They have not succeeded in doing things cheaper, have they?

Mr. Mitter.—If they wanted to make that factory self-supporting with only 100 gross a day, I have nothing to say. So far as I can see, anything less than 700 gross a day will not lead to success.

President.—Anyhow Government will have to manufacture at least on as big a scale as some of the big factories. Is not that so?

Mr. Mitter.—Yes, just to prove that they can be manufactured.

President.—I doubt very much whether Government will ever be able to manufacture anything more cheaply than anybody else.

Mr. Mitter.—I assume that from Mr. A. P. Ghose's statement.

President.—It is not shewn so far. I do not know whether Government has actually succeeded in producing an article more cheaply than it could be done by a private agency efficiently run.

Mr. Mitter.—The only match factory run by Government so far as I know is that run by the Government of Bihar and Orissa but its output is so low.

President.—I am asking you generally whether a Government business is run more economically than a private business.

Mr. Mitter.—The Bihar Government have not run that factory to prove the commercial success.

President.—That is no longer a demonstration factory. You want Government to produce more cheaply than others, don't you?

Mr. Mitter.—Government have not done anything on the lines suggested by Mr. Ghose. Mr. Ghose says that if a factory is started in the forest itself

President.—Again you are quoting Mr. Ghose. We have done with Mr. Ghose. I am just asking you as an officer interested in the development of industries whether you can show me any instance where Government has definitely proved that it can manufacture anything—it does not matter whether it is matches or anything else—more cheaply than a private agency. I am not inclined to dispute Mr. Ghose's figures on the ground that Mr. Ghose has refused to appear before the Tariff Board.

Mr. Mitter.—I don't think that Government have so far made any attempts with regard to the achievement of a commercial success of an enterprise.

Mr. Mathias.—I think you have seen the costs of the Patna factory producing 100 gross a day. The factories for which you have given us costs are also producing between 50 and 100 gross a day. You give their costs as Re. 1-2-6 whereas the costs of the Patna factory are Rs. 2-4-9 per gross. That does not lend support to your contention that Government can manufacture more cheaply than a private agency. Government interference would, if anything, be to the disadvantage of the industry.

Mr. Mitter.—I don't think so. The factory should have been situated in a proper place which is in the forest side. If you take the Patna factory, it is not where it should have been placed. The Patna factory so far as I know, was intended to be a demonstration factory.

President.—Do you consider that if Government started a factory in the forest, it would be cheaper in the long run?

Mr. Mitter.—I think so.

President.—Do you suggest that the Swedish Match Company would not do so if it found more profitable?

Mr. Mitter.—I am not sure that they are not going to do that in future.

President.—They have said so that they don't regard that as a commercial proposition.

Dr. Matthai.—They have investigated that question very carefully.

President.—If anybody had any experience of match manufacture perhaps you would admit that the Swedish people had.

Mr. Mitter.—I am not in a position to accept as gospel truth what the Swedish trust has said especially at a time when an enquiry, which is being held, was going to settle their future.

President.—That is their opinion and we have also gone into this question pretty fully and we are not sure that they are not right.

Dr. Matthai.—Supposing Government are not able to make them more cheaply than the existing factories, do you want Government to start a factory and supply splints and veneers at less than cost price, that is as a sort of bounty?

Mr. Mitter.—Never.

Mr. Mathias.—As the main supply of wood is from the Sundarbans there will, I think, be some difficulty in having your factory in the Sundarbans.

Mr. Weston.—We should not accept that. We know that there are great resources of wood up in the Terai and Kalimpong hill areas which have not been touched where there are better qualities of wood than genwa.

Mr. Mathias.—The Terai is somewhat inaccessible.

Mr. Weston.—Yes.

President.—I don't think that the Government of India would have any objection to the Government of Bengal undertaking this. If it is a feasible proposition that Government could manufacture splints more cheaply than any of these factories, I think that if you persuaded the Government of Bengal, it might be done.

Mr. Mitter.—We have not so far gone up to Government with any definite proposal.

Dr. Matthai.—I understand that the Government of Bengal definitely turned down the project of a demonstration factory.

Mr. Weston.—No. They asked me to come up with definite proposals.

Dr. Matthai.—That was about two years ago.

Mr. Weston.—Yes. They asked the Director of Industries if he could put up proposals for their consideration on the basis of Mr. Ghose's report—I am speaking of course from memory—and it has not been done. One of the reasons why it was not done is that you are examining this question.

President.—This is what the Government of Bengal in the Department of Agriculture and Industries, have written, in their letter to you No. 5461, dated the 11th November 1925, "In the circumstances explained above, Government are of opinion that there is no scope for the establishment of a self-contained match factory on the lines recommended by Mr. Ghose." That is the opinion of the Government of Bengal.

Mr. Mitter.—Yes, for a self-contained match factory.

President.—There was no other proposal made by Mr. Ghose.

Mr. Mitter.—Yes, a suggestion was made for the starting of a factory for making splints and veneers.

President.—I am just trying to show you that we have examined witnesses about costs, including the Swedish Match Company, and the Swedish Match Company have definitely said that it would not be more profitable to establish a factory for cutting veneers and splints in the forest. They have given us reasons for not doing that. Except in one solitary instance where splints are being manufactured in Kashmir, no attempt has been made and it is not at all certain whether the Kashmir experiment will succeed or not because if it did, then it is not that the splints would be cheaper in any case but that the difficulty of getting sufficient quantities of wood might be got over to a certain extent. Here we are discussing the question whether it would be cheaper for Government to manufacture splints and veneers if it established a factory in the forests and on that we have no data except what you say probably basing your opinion on what Mr. Ghose had said.

Mr. Weston.—Would not the Forest Department give you any reasonable idea? They know or should know what resources of wood they have.

President.—They know what the resources of wood are but none of them are experienced enough to suggest what the commercial value of the project might be.

Mr. Mathias.—Dehra Dun has not carried out any experiments.

Mr. Mitter.—We are talking of splints.

President.—Theoretically it should appear to be feasible but applying practical considerations it does not seem that it would be more economical.

Mr. Weston.—Mr. Ghose has mentioned a considerable number of woods suitable for match manufacture. A Forest Engineer told me that there was a lot of match wood available in the Kalimpong forests. I asked him "why didn't you tell us before". There was no answer to that. They simply do not know what resources they have in the matter of wood supply.

President.—If that was so, supposing it was found cheaper to manufacture splints in the forest, what we are discussing is whether Government could

do it cheaper than the other factories. That is the point. Mr. Ghose thinks that Government can.

Mr. Mitter.—I think that Government ought to give a lead to these small cottage manufacturers. If they arrange a proper lease of the forests, there will be no dearth of manufacturers who will be in a good position to manufacture splints and veneers in the forest.

President.—We are going away from the question under discussion. There is no difficulty about Government giving any lease, and there is no difficulty about their being able to get wood. All Governments, as far as we can understand, have tried to assist them in every way they can by giving them cheap leases, charging them small royalty and things like that ; so that enterprise is lacking as far as one can see and it does not appear to be a very paying proposition.

Mr. Mitter.—That is on account of the unstable conditions of the industry.

President.—That may be so. Now the whole point is whether Government can do better by undertaking the manufacture itself than a private agency.

Mr. Mitter.—Private enterprise will do it cheaper undoubtedly but the reason why I have suggested that, is to give the small manufacturers a lead. After starting, the Government will gradually withdraw its interest and the factory will be run by co-operative organisations.

Mr. Mathias.—Have you considered this question? If Government started a splint and veneer factory in the forest and produced them cheaper, then the larger factories would also start their factories in the forest and thus bring down their cost of production more than the cottage factories.

Mr. Mitter.—If the Government want to develop the home industry system of each match manufacture and decide to do it on the lines suggested by me, then the question of the bigger factories manufacturing veneers, etc., at the forest site does not appear.

Mr. Mathias.—The scheme would not then reduce the difference between the cottage industries and the larger factories. The gap would still remain the same, so that you would not be able to establish that the cottage industries would be able to compete.

Mr. Mitter.—It is purely a matter of opinion, if Government decide to develop this industry on the lines I have advocated, then of course everything is clear ; but if they say that the industry should be allowed to develop on other lines, then there may be some truth in what you say.

Mr. Mathias.—If Government are to accept your proposal for a discriminating excise, you will have to establish that at some period the cottage industry would be able to do without this excise. You cannot expect Government to encourage an uneconomic system indefinitely. So far as we are able to see, you have not made any suggestions for reducing the costs which will not apply equally to the larger factories and therefore the gap must remain approximately constant and the cottage factories must always continue to have this discriminating excise.

Mr. Mitter.—So long as the selling price of Indian matches manufactured by the home industry system do not exceed one pice per box, I am not prepared to admit that this system is uneconomical.

Dr. Matthai.—Your proposals are really two I suppose. The first is that there should be central splint factories to supply splints and veneers cheaper than their present price and then there should be an excise duty upon factories which are not cottage factories.

Mr. Mitter.—Yes, on factories producing over 100 gross a day.

Dr. Matthai.—That is your test for a cottage factory.

Mr. Mitter.—Yes.

Mr. Mathias.—Has the Industries Department been able to arrive at a satisfactory definition of cottage factories? I ask this question because, so far as we can see, the processes employed by the small factories are not

essentially different from those employed by big factories like Esavi's. There is a large amount of manufacture done by hand in both cases. Have you arrived at any satisfactory definition?

Mr. Weston.—It is impossible to define satisfactorily a cottage match manufacturing industry.

Mr. Mathias.—Any arbitrary division such as 100 gross or 50 gross would be rather difficult to work.

Mr. Weston.—I should think so.

Mr. Mathias.—It would be imposing a severe and undeserved handicap on factories that produce say 120 gross a day.

Mr. Weston.—It is quite conceivable.

Differential excise duty.

President.—*Mr. Mitter*, let me understand your point about this differential excise. That is one of the other subsidiary proposals you have made. You propose two kinds of excise, don't you? In clause (a) you propose a duty of Re. 1-2-0 on the products of those factories whose output is over 1,000 gross per day or 2,80,000 per annum (taking 280 working days per annum); in clause (b) you propose that an excise duty of annas 4 per gross should be levied on the products of the factories producing 100 to 1,000 gross of matches per day and in clause (c) you say that cottage workers producing less than 100 gross per day should be exempted from paying any excise duty for at least five years. As regards your second proposal it simply means that first of all you convert the big factories producing over 1,000 gross a day into small factories producing 100 to 1,000 gross a day by giving these factories a preference of 14 annas per gross which is a tremendous difference. It would pay a man to have 4 or 5 small units instead of 1 large factory.

Mr. Mitter.—No! I don't agree. I have explained this very fully in my supplementary note now lying before you.

President.—That would not serve your purpose. Instead of having to compete, as now, against these two categories of factories, you will then be left to compete against a lot of small factories. If you give factories producing 100 to 1,000 gross per day a preference of 14 annas, then the big factories will go out with this difference in the duty.

Mr. Mitter.—Not necessarily, this has been explained in my supplementary report.

President.—Then your competition will begin with those factories producing 100 to 1,000 gross a day and in their case there is a duty of 4 annas per gross and that 4 annas would not necessarily suffice for you.

Mr. Mitter.—It will I think.

President.—Not on the figures we have. Just now there is a margin of 10 annas. They don't get anything like that. They are getting about one or two annas less than the Swedish Match Company. Of course we are now talking of the wholesale price. The retail price is one pice for both, so that there is no question of 1½ pice per box.

Dr. Matthai.—You are an Industrial Engineer; why do you want to penalize an efficient factory?

Mr. Mitter.—I have advocated it for the development of the industry on the lines, to be of the best interest to the country.

Dr. Matthai.—Why do you want to encourage a man producing only 100 to 1,000 gross a day? He is not a cottage worker.

Mr. Mitter.—I simply said that to enable them to get at least some portion of the market.

President.—Other factories cannot survive with a preference of 14 annas. We will put it this way. Supposing you get Rs. 1-8-0 to-day and then a duty of 14 annas is put up, that raises the price to Rs. 2-6-0. Then these other people who pay only 4 annas will put up their price from Rs. 1-8-0 to Rs. 1-12-0 and the big factories would be wiped out. Then the whole of the

organization will be converted into small factories producing less than a thousand gross. My colleague was rightly asking you whether you would be in favour of that. Those are not cottage factories; why should you want to penalize bigger factories and compel them to restrict their production to below 1,000 gross per day? You consider that these smaller factories should have a difference of 4 annas in the matter of excise. Supposing Government does not want to levy this excise because excise as I have explained more than once, is a purely revenue question, that is to say Government will only levy an excise when it wants money. Would you suggest that, even if Government did not want money?

Mr. Mitter.—Government want money! Government want also to solve unemployment as far as it lies in their powers.

President.—Supposing Government did not want the money.

Mr. Mitter.—My contention is that the Government of India want money.

President.—Government always want money: we all know that! They have got to show that they really want money and they have to satisfy the Assembly. Take the case of last year's budget. Government had a surplus and they did not know what to do with it so they remitted the provincial contributions.

Mr. Mitter.—Bengal wants more money and wants to solve the unemployment problem as far as possible.

President.—Supposing Government did not want any money from the Match industry, do you suggest that they should levy an excise in order to give protection to that industry?

Mr. Mitter.—My argument is that the Government of India actually want money and on that assumption I have based my case.

Dr. Matthai.—Supposing they don't want money, what is your proposal then?

Mr. Mitter.—The unemployment problem wants to be solved.

Dr. Matthai.—Then you have no other proposal to make?

Mr. Mitter.—Nothing besides what I have already said.

President.—Then the cottage industry does not get any assistance.

Mr. Mitter.—The only way we can offer any assistance, if that is possible, is by levying an excise duty.

President.—I have shown you just now that two kinds of excise duty won't do. Don't you agree?

Mr. Mitter.—I don't.

President.—Then if there is to be an excise duty, there must be one higher excise duty and one lower and you want to keep the difference at 4 annas. Having got that 4 annas you must be able to satisfy Government that in five years time you would be able to do without it. At present have you got materials to show that you could do that?

Mr. Mitter.—That is what people say. I have not got any materials other than what I have furnished in two of my reports to substantiate my statement that within five years time they will be able to stand on their own legs.

President.—We cannot say that, people say so. We have got to say "here are the costs to-day and these costs will come down by four annas or five annas in five years time" and I am trying to get materials on which we could say that. Have you got those materials?

Mr. Mitter.—I cannot give you anything besides what I have already given.

President.—You know what our terms of reference are. We cannot go very much beyond our terms of reference. One of the conditions is that if we recommend any protection, the industry must be able to do without protection at some future date, reasonably distant, and you say five years. We must have materials to show that in five years time the costs will come down by four or five annas and I want to know whether there are materials to show that so far as the cottage industries are concerned. In fact some of

the factories who appeared before us told us that their costs would be one or two higher relatively than those of the big factories.

Mr. Mitter.—Do they urge that their cost of production will not come down?

President.—It will not come down more rapidly than the cost of the bigger factories. The margin of four annas will continue. If such is the position what do you suggest we should do in order to enable us to report that the industry deserves protection and that it would be able to do without it after some time.

Mr. Mitter.—I have shown in my first report that the cost will come down, vide sub-para. (c), (d), (e) of para. 6.

President.—If we were to say that the supporters of the cottage industry were not able to place before us any materials to show that the industry would be able to do without protection, then that is fatal to your case.

Mr. Mitter.—I believe manufacturers who are proceeding on cottage lines will be able to give you a better answer than I can.

Dr. Matthai.—It is simply an article of faith!

President.—The Board has examined the representatives of the Bangiya Deasalai Karjalaya and the Indian Match Manufacturers Association, Calcutta and the impression left on the mind of the Board was rather that this margin would continue to remain.

Mr. Mitter.—The Indian Match Manufacturers Association gave us entirely the other unpression that if some sort of protection was given in five years time they would be able to reduce their costs.

President.—No doubt they would be able to reduce their costs but you must also assume that the larger factories would also be able to bring down their costs. When they both brought down their costs the gap of 4 annas cannot be bridged and if that cannot be bridged that is fatal to the cottage industry.

Mr. Mitter.—But there is a minimum below which they can never come down.

Mr. Mathias.—Captain Petavel said in answer to my colleague at the time of his oral examination that on economic grounds no case could be established for the continuance of the cottage industry but that the case was to be supported on sociological grounds.

Mr. Mitter.—His opinion was entirely to the contrary when he said in his introductory note on "Match Industry in Danger" that the "Cottage industries using local wood, local labour, can produce matches at a lower price than the factories Indian or foreign".

Dr. Matthai.—Is there any kind of State Aid administered by the Industries Department in Bengal?

Mr. Weston.—No.

Dr. Matthai.—Is there any proposal for State aid?

Mr. Weston.—It had been proposed and discussed.

Dr. Matthai.—Is that just proposed?

Mr. Weston.—That has been before the Government for the last six years.

President.—That has not been passed yet?

Mr. Weston.—No.

President.—So far as economic grounds are concerned—we are chiefly concerned with the economic grounds—there is no case, but supposing there was this sociological question, we are of course reporting to the Government of India and the Government of India could only look upon the question from the point of view of India as a whole, that is as regards the whole industry. But so far as the match industry on cottage lines is concerned, there is no other province in India where the question exists to any large extent as in Bengal.

Mr. Mitter.—I do not agree with the President.

Mr. Weston.—Do you mean as a sociological question?

President.—I mean the Match industry as a cottage industry except perhaps to some extent in Madras, so that this becomes a provincial matter. If the question was to be dealt with from the sociological point of view it would be for the provincial Government to deal with it and it can deal with it on any of the lines suggested. I am trying to explain what our position is. We cannot make any recommendations which can only apply to Bengal.

Mr. Weston.—I quite follow what you say.

President.—If such a question exists here in this province it is for the provincial Government to examine it and do what it can. In such a case supposing any special assistance was required, it would be for the provincial Government concerned, to give it.

Dr. Matthai.—If you ever have a State Aid to Industries Act in Bengal you ought to take your notes to the Committee appointed under that Act and ask them for assistance.

President.—As regards the exemption of the smaller factories, do you see any administrative difficulty?

Mr. Mitter.—In what way?

President.—If you limit the production to 100 gross would it be easy for the excise department to detect whether 100 gross or 500 gross were made?

Mr. Mitter.—That would be a matter for the Excise department.

President.—We have received evidence from a very experienced Commissioner of Excise and we were told that an excise even in the case of larger factories would be a very difficult matter. That is of course for the department to consider, but if that is the position could the excise authorities keep sufficient supervision to prevent the evasion of this duty? We have seen some of these factories and it is very difficult to say how much they manufacture. Even if you had the smallest unit, by employing five times as many men you could produce five times as many matches as you are supposed to produce, so that if we recommended some sort of exemption we will have to find some solution of this difficulty. What do you suggest we should do in that case? Have you thought it out?

Mr. Mitter.—I thought that would be a matter more for the Excise department than for the Industries department.

President.—You have not considered it?

Mr. Mitter.—I have considered it generally and my impression is that it will not be a very difficult matter.

Mr. Mathias.—A man may produce 100 gross one day and 200 another day; it would require very careful examination of the accounts, totalling of the whole output of the year and dividing it into months and so on; how are you going to administer the excise? At the end of the year one of the small factories may be called upon to pay Rs. 1,800 or possibly more and the result would be the closing of the factory.

President.—You have made a statement that this system of manufacture is successfully followed in Japan. Where did you get this information from?

Mr. Mitter.—I got it from a gentleman whose name I forget now while I was investigating the conditions of the industry about a year ago. He had just then returned from Japan and I accidentally met him and he gave me that information.

President.—You have said successfully. I don't deny that the industry is carried on in Japan and has been in existence for many years, but the best success of the industry depends upon the export figures very largely. Japan was doing a very large export business with India, as you know and at one time the imports into India went up to 15 million gross. Now the import from Japan has practically vanished. If it was a successful industry that would hardly be the result.

Mr. Mitter.—When I say that they are doing very well I mean they are doing well in Japan, I mean with regard to the sale of their matches in their own country.

President.—Probably it was because it was protected by a very high tariff wall.

Mr. Mitter.—We also want the Industry to be protected just as it is in Japan.

Dr. Matthai.—It is not true even in Japan that these cottage factories are able to hold their own against factories operating on a large scale. Your information is rather out of date. There was a time when the cottage factories in Japan were able to hold their own but I don't think that is the position now as far as one knows.

Mr. Mitter.—My information is contrary to your.

President.—The figures suggest that they are not able to compete against bigger factories and practically, so far as India is concerned, exports from Japan to India have gradually vanished and the quantity now is negligible. Is there much feeling in Calcutta as regards the cottage industry outside the industry itself?

Mr. Mitter.—At least at the time when I wrote my note there was.

President.—From what sort of people?

Mr. Mitter.—I will just give you an example. Mr. J. C. Gupta a member of the Bengal Legislative Council whom I met about a year ago in Dacca gave it as his opinion that that the cottage industry should be encouraged. He entirely agreed with me in my views and there are men of his type.

President.—Have they studied the conditions of the industry as you have done, or have they expressed their opinion on general grounds? Supposing I had not gone through their figures I would also like to see every home doing this and getting money and so on. That is a different thing from the opinion of a person who has examined the conditions prevalent in the cottage industry and said that this industry should be supported.

Mr. Mitter.—At the time I was investigating this question there was this feeling.

President.—What one feels is this. In this enquiry which we have been holding for many months now, except yourself and perhaps one or two others no one has appeared before us who is not really a middleman who is making fairly good profits, and who thinks that his profits have been gradually dwindling. We have not had a single witness who is really interested in manufacturing on a small scale, who can say without the interference of the middleman "here is my industry, I am being ruined", and ask for protection of the cottage industry. Generally the man who has appeared before us is either a factory owner or a middleman, who has really made as much out of the labour as possible. It is rather a pity that you have not been able to bring before us any witnesses who are really personally interested to that limited extent in the industry.

Mr. Mitter.—I could have brought any number of men if I were asked to give evidence a year ago. I did not know whether I was going to be examined or not until after full one year to my surprise I find that my evidence was required.

President.—Your department was informed.

Mr. Mitter.—I was informed only 9 or 10 days ago.

President.—You yourself have said that so far as you know there are no such people at present.

Mr. Mitter.—All that I have said that I do not know the whereabouts of these people.

Dr. Matthai.—Personally speaking I have great sympathy with your desire to develop cottage factories but we have to be careful as to the sort of industry we select. There are some industries which don't lend themselves to development on a cottage basis.

President.—This Board would never relish a position in which an industry which deserved to be protected was killed because it could not make any proposals. The whole point is that the Board must be satisfied as to its existence before we recommend anything. Is there any other point on which you want to express any opinion?

Mr. Mitter.—My report on the development of this industry should not be interpreted to mean that I am against industrialization on a big scale. But I drew up this report mainly from the point of view that if the match industry was developed on the lines recommended in my note it would be to the best interests of the country. My views should not be taken to mean that I am against factory system or against industrialization.

President.—It is a very laudable idea that you have in mind but the only thing is that we should like to have all the materials before us.

Mr. Weston.—I am in agreement with my colleague to this extent that India is quite capable of making all the matches that India requires and that it has all the materials and the necessary capacity for doing so.



सत्यमेव जयते

Director General of Commercial Intelligence.

Letter No. 11146-D., dated 23rd December 1927.

With reference to your letter No. 1016, dated the 13th December 1927, on the subject of imports of matches into non-British ports in India, I have the honour to enclose a statement showing the quantities and values of the matches imported direct from foreign countries by sea to non-British ports in India during the past five years so far as statistics are available in this department. It will be observed that the denomination of quantity is not in all cases uniform and figures have been reported not only in gross but also in cases, tons, etc. As the figures of Indian States are not being utilised for the publications of this department they were not scrutinized when the returns were received. A reference is being made to the states concerned to make clear the unit of quantity.



सत्यमेव जयते

Imports of Matches from abroad into non-British ports in India.

	1922-23.		1923-24.		1924-25.		1925-26.		1926-27.		REMARKS.
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
<i>Kathianwar States.</i>		Rs.		Rs.		Rs.		Rs.		Rs.	
Porbander . . . { Gross	2,800	2,560	2,500	2,250	9,026	6,535	2,700	11,775	..	..
{ Cases	..	..	..	..	..	..	130	..	195	14,625	
Bhavnagar . . .	..	..	..	..	..	..	..	..	..	..
Nawanagar . . . { Gross	88,500	1,04,909	559,336	4,58,434	214,730	2,05,353	343,600	2,20,347	422,500	3,61,400	
{ Boxes	345	..	..	..	..	..	..	..	..	..
Jafarabad . . .	..	..	..	..	..	..	..	..	..	..
Junagadh . . . { Gross	Returns not received.	..	..	..	15,919	80,700	87,500	66,960	18,500	12,925	
{ Cases	..	..	..	..	522	..	70	..	..	..
Morvi . . . Gross	Returns not received.	..	..	..	..	..	3,250	8,125	4,000	10,000	
<i>Other Indian States.</i>											
Travancore . . . Gross	..	..	162	375	..	..	..	..	..	..
{ Gross	..	..	..	..	..	..	..	..	1,000	800	
{ Tons	..	..	..	..	..	..	..	..	1	650	
Baroda . . . { Boxes	..	..	..	..	..	..	..	..	35	(a)	
{ Cases	..	..	..	..	..	..	..	..	200	(a)	
Cambay . . .	..	..	..	..	..	..	..	..	..	..

(a) Value not stated.

	1922-23.		1923-24.		1924-25.		1925-26.		1926-27.		REMARKS.
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
<i>French Possessions in India.</i>		Rs.		Rs.		Rs.		Rs.		Rs.	
Pondicherry . . . . .	...	...	...	...	...	...	...	...	...	...
Karikal . . . . .	...	...	...	...	...	...	...	...	...	...
Mahé . . . . .	...	...	...	...	...	...	...	...	...	...
Yanam . . . . .	...	...	...	...	...	...	...	...	...	...
Total . . . . .	...	...	...	...	...	...	...	...	...	...
<i>Portuguese Possessions in India.</i>		Rs.		Rs.		Rs.		Rs.		Rs.	
Nova Goa	65,273	91,074	94,867	1,17,388	136,891	1,40,260	99,720	97,831	92,679	91,183	
Mormugao . . . . .	...	...	1,500	2,900	21,003	25,543	10,495	13,369	...	...
Calem . . . . .	...	...	...	...	...	...	...	...	...	...
Damao . . . . .	...	...	33,051	38,180	42,711	59,177	36,005	38,111	...	...
Diu . . . . .	...	...	119	177	12	11	...	...	5,500	8,507	
Total	65,273	91,074	129,537	1,58,645	156,223	2,21,991	146,220	1,49,311	98,179	99,634	

Indian Match Manufacturers' Association, Calcutta.

(1) *Letter to the Secretary to the Government of India, Department of Commerce, No. 527, dated the 16th October 1926.*

I am directed to enclose herewith a copy of the Resolutions, passed at an emergency meeting of the Executive Committee of the Indian Match Manufacturers' Association, held on Thursday, the 7th October 1926, to consider your Departmental Resolution No. 235-T. (14), remitting the Match Industry to the Tariff Board, a copy of which was forwarded to this Association under cover of your letter No. 235-T. (14), dated the 2nd October last.

I beg to point out that, though the Executive Committee must necessarily be limited to Calcutta Members, we are able to say that these Resolutions, passed by the Executive Committee, are generally approved. You have no doubt noticed that they were promptly published in every important paper in India, including vernacular ones. The leading Calcutta papers, daily as well as periodical, published them in full, and no criticism has reached us or, has, as far as we know, appeared in any paper after this publicity.

According to your Resolution, the immediate cause of reference of the Industry to the Tariff Board is the fall of Revenue on the import of matches, splints and veneers which has been estimated at 40 lakhs of rupees in 1925-26, as against the receipt under those heads in 1922-23, and the loss is considered likely to become more serious as the Indian factories overcome their technical difficulties and attain full production.

My Committee, however, pleading for sympathetic treatment of Indian efforts towards industrial development, beg the Government to consider the following facts :—

The value of certain imported raw materials, such as, chemicals, timber, paper, gum, machinery, etc., required for the Industry, has increased enormously—as appears from Government Reports,—since the Industry has been taken up in this country with the conversion of the import duty on matches from an *ad valorem* to the specific character. The Executive Committee, therefore, believe that the loss of Revenue on imported matches has been appreciably counterbalanced by the increased Customs receipts under those heads. They are, of course, fully aware of the fact that, since the conclusion of the European War, there has been a general development of various industries in India, and others using the above materials have to some extent, contributed to the increase. They, nevertheless, believe that the Match Industry has consumed the largest share of the increased importation. This, of course, cannot be proved in detail in the absence of any definite statistical information; but if the requirements of the Industry were properly ear-marked for at least one year this statement would be well maintained.

The Executive Committee also direct me to refer to the Income and various other local taxes, paid by those carrying on the Industry, which also diminish the loss of Revenue.

They, therefore, believe that the loss is appreciably less than it appears.

It seems from your Resolution that the Tariff Board is to confine its enquiry mainly to the following items :—

- (1) Whether the three conditions laid down in paragraph 97 of the Report of the Indian Fiscal Commission are satisfied in the case of the Match Industry in India, and whether the Industry should be protected.
- (2) If the finding of the Board be in the affirmative, it is to report at what rate the import duty on matches, splints and veneers should be fixed in order to afford necessary protection to the Industry and whether alternative measures of protection could be suitably adopted. It has been hinted in this connection that, if the finding of the Board be in the negative, the Government will be theoretically free to lower the import duty on matches in the interest both of the consumer and their own Revenue.

- (3) The Board is to report as to the extent to which vested interests have been created in India as a result of the present rate of duty; how far these interests require consideration, and what prospects there are of the Industry establishing itself if the present rate of duty is maintained.
- (4) In the latter case, or in case the duty is maintained approximately at the present figure, whether the loss of Customs Revenue can be made up, in whole or in part, by any other appropriate form of taxation of the Industry.

I beg to state that item (1) has already been answered in my letter No. 163, dated the 25th April 1925, from which it will be seen that it is no longer an "assembling industry." The low import of splints and veneers will also lend support to this view.

It remains for the Board to answer item (3) in course of its enquiry.

The only matter that requires fuller reply is in connection with items (2) and (4), although item (2) has been partially dealt with in my letter No. 163, dated the 25th April 1925. These items have in fact a direct bearing on the immediate cause of reference of the Industry to the Tariff Board.

The Executive Committee believe that the Industry has a future, and if allowed to grow under fair conditions, will be a message of hope to the unemployed middle classes. This is perhaps its special feature.

The following are the facts they desire to urge strongly for consideration of the Government :—

The Industry has not yet had time to overcome its technical difficulties and India being new to industrial development some years must necessarily elapse before it can do so.

In its present state it is obviously liable to be crushed by combinations with the advantage of ample capital and long experience.

It was to ward off this danger that the Association proposed an excise on matches, manufactured by factories financed wholly or in part by foreign capital. The danger this Association apprehended very soon appeared in the form of a Trust, establishing factories in several important commercial centres of India. With its combined capital and experience, it certainly has the strength to crush the Indian Industry.

In presence of the actual danger a deputation of this Association waited upon the Hon'ble Members in charge of Finance and Commerce on the 18th of December 1924, and laid the following suggestion before them: That an excise duty of annas eight per gross of matches be imposed on factories, financed wholly by foreign capital, if they yield an output of more than 100 gross per diem. That in the case of factories, financed by mixed capital, the excise be in proportion of the foreign capital employed (*vide* my letter No. 85, dated the 24th December 1924).

In this connection I am desired to state that the above suggestion was based on the following consideration :

Before this foreign competition arose, the Indian firms sold their matches at about Rs. 2-8 per gross on a general average. But since it has arisen, those using the native woods have been compelled to reduce their prices and now they are selling their matches at about Re. 1-9 (instead of Rs. 2-8) per gross, while those using foreign timber are selling at about Rs. 2, on an average. The result has been that a large number of Indian Industries have had to shut down. Now, as is immediately apparent, the reason for our suggesting the eight annas discriminating Excise is that it would approximately re-establish the former position. The effect, in general terms, would be that the consumer would have to pay exactly the same price as now, leaving a reduced, but still sufficient, margin for the distributor. An important incidental effect would be to induce the manufacturers, paying the Excise, to make a larger use of imported wood (selling at Rs. 2-8) as it would be more attractive to the distributor leaving him a higher percentage.

There is another important point that may be usefully mentioned here, namely, that whilst the foreign producers are able to operate in combination, the Indian ones, small, scattered and unorganised, are not. They must, therefore, look to the Government for help. If the help is denied the whole Industry will pass into the hands of foreign Trusts in no distant future.

In view of the above facts the Executive Committee beg to protest most emphatically against the imposition of any direct tax indiscriminately on all factories in India, which, they believe, would increase their danger and strengthen the hands of the foreign competitors to crush the Indian Industries and would be ruinous from every point of view so far as the interest of the Indians in the Industry is concerned.

The Association, having every confidence in the sympathetic attitude of the Government of India towards Indian industrial efforts hope, that they will request the Tariff Board also to consider the circumstances of cottage industries, which have to pay a larger cost of production, and are handicapped in various other ways. My Committee believe that the Government will realise the importance of cottage industries as a first step towards the practical industrial education of the people of India.

It is in view of all the above facts that my Committee venture to request the Government of India to refer this as also their previous correspondence on the subject, namely, my letters Nos. 3, 85, 163 and 191, dated the 6/7th June, 1924, 24th December 1924, 25th April and 27th July, 1925, respectively, to the Tariff Board, and to allow them an opportunity to give their evidence to the Board.

Enclosure.

Extracts from the proceedings of an emergency meeting of the Executive Committee of the Indian Match Manufacturers' Association, held on Thursday, the 7th October 1926.

* * * * *

The Honorary Secretary placed before the meeting a letter from the Assistant Secretary to the Government of India, Department of Commerce, forwarding for information a copy of the Departmental Resolution No. 235-T. (14), dated the 2nd October 1926, remitting the Match Industry to the Tariff Board.

ORDERED.—That the following resolutions of the Committee be communicated to the Government of India, Department of Commerce:—

1. That the duty on imported matches, splints and veneers be transferred from the schedule of Revenue to that of Protective Duty.
2. That the existing import duty on matches, splints and veneers be retained as it is.
3. That it be pointed out to the Government of India that the Industry has not had time to get over technical difficulties.
4. That the Government of India be informed that the association can but most emphatically protest against the imposition of any direct tax on the local Industry unless on the terms urged by the Association in their Honorary Secretary's letter No. 85, dated the 24th December 1924.
5. That it be pointed out to the Government of India that the Association believe that the fall of Revenue on matches, splints and veneers have been substantially recouped from the enhanced revenue on the import of certain raw materials, required for the Industry, such as, chemicals, timber, paper, gum, machinery, etc., as also from Income and various other local taxes, payable by factories.
6. That the Government of India be requested to ask the Tariff Board to suggest special facilities that may be offered to cottage industries with a view to enabling them to survive in the face of competition of mass production.

7. That the Government of India be approached with a request to refer all previous correspondence on the subject passed between them and the Association, to the Tariff Board.
8. That the Government of India be also requested to allow the Association to send their representatives to give evidence to the Board.

ORDERED ALSO.—That a copy of the above Resolutions be forwarded to the Tariff Board.

(2) Letter dated the 22nd June 1927, from the Indian Match Manufacturers' Association, Calcutta, to the Tariff Board.

In continuation of our letter No. 643 of the 27th of May 1927, I beg to forward herewith two proposals, one being an alternative to the other, in compliance with the request made by the members of your Board at a discussion held between them and the representatives of this Association on the 9th of May last.

We are asked first to describe the kind of competition against which our members desire protection, and the manner in which we think it might be given, and to make some suggestions as to the lines on which the legislation, in connection with the excise proposed, might be undertaken so as to make as effective as possible, and prevent evasions of payment.

To recapitulate:—

The Foreign Trusts which have established match factories in India are at a great advantage relatively to purely Indian concerns in the following respects, among others:—

- (a) Financial strength.
- (b) Combination.
- (c) Efficiency due to larger experience.
- (d) Lower cost of production due to larger capital and production and consequent greater use of labour-saving appliances and methods.
- (e) Reduction of overhead charges owing to larger production.
- (f) Advantages in respect to raw materials and machinery which, in the case of this industry, are mostly imported from Sweden.

These advantages, it is believed, reduce the cost of production to the extent of about 8 annas per gross. The Indian concerns, small and scattered as they are, with little combination, cannot compete with these Trusts unless helped by Government till they gain more experience and thereby learn to reduce the cost of production and improve the quality of their products.

The discriminating excise, if imposed, will make it difficult for factories belonging to Foreign Trusts to ruin their Indian competitors or to deprive the Government of its revenue from matches.

It is to the advantage of all the parties concerned to save the Indian factories in the present crisis and enable them to work side by side with those owned by the Trusts; but if nothing is done the Indian factories will be all ruined and the consumers will ultimately have to pay more when the Trusts have no competitors and we shall have the evils of monopoly.

The reason for which some additional measures of protection for cottage industries are applied for, is that, without such protection, they cannot survive in the face of competition of mass production. Their cost of production is high owing to the fact that they invariably buy raw materials at retail prices, and carry on all the processes by hand and, moreover, they cannot sell their produce on credit and get a fair price. In fact, many of them have shut down during the last few months in the absence of any measure to protect from the effect of ruinous price-cutting.

The second proposal we make we believe to be a simpler one, and if accepted it seems calculated to satisfy all parties concerned.

It will enable Government to make the largest possible income from matches, the Indian factories to continue, and will at the same time make it possible for the consumers to continue buying matches at the present market rate. Factories belonging to the Trust too will earn sufficiently well to justify their enterprise in the direction of making this country produce its own matches.

In this connection I refer to our letter No. 527 of the 16th of October 1926, from which it will be seen that these proposals should not affect the consumers who should pay the same price as now, leaving a reduced but still quite ample margin for the distributor.

Another anticipated effect of the excise would be to make the excise-paying factories leave the use of Indian wood to Indian firms and concentrate on the production of matches with foreign wood which command a higher price. The tendency of this might be to cheapen the Indian wood to the benefit of Indian firms, whilst the increased importation of foreign wood would increase customs revenue.

It will be seen that the proposals made by the Association are as simple as they can be made, and are not difficult to be carried out if it is the desire of the Government to help the country to develop industrially in the interests of its people.

The following firms manufacturing matches on cottage scale will welcome a visit by the Board on any date to be previously arranged by correspondence with the President or the Honorary Secretary of this Association:—

1. National Match Factory, 64, Ultadingi Main Road, Calcutta.
2. Bangiya Diasalai Karyyalay, Ultadingi Road, Calcutta.
3. Bengal Match Works, 2, Krishnatara Nasker Lane, Naskerpara, Ghosery, Howrah.
4. Prasanna Match Factory, Dacca. (If convenient to the Board.)

The following factories are willing to send their representatives to appear before the Boards and to give oral evidence in support of the claims of the Indian Match Industry to protection:—

1. Karimbhoy Match Manufacturing Co., 32, Canal West Road, Calcutta.
2. Pioneer Match Factory, 16, Dum Dum Road, Dum Dum.
3. Bhagirathi Match Factory, 1, Jogen Bysack Road, Barnagore, 24-Pergannas.
4. National Match Factory, 64, Ultadingi Main Road, Calcutta.
5. Bangiya Diasalai Karyyalay, Ultadingi Road.
6. Lucifer, Ltd., 1/1, Gurudas Dutt Garden Lane, Calcutta.
7. Bhowani Engineering and Trading Company, 56, Gauribari Lane, Calcutta.
8. Jalpaiguri Industries Company, Limited, Jalpaiguri.
9. Bengal Safety Match Works and Medical House, Ltd., Rangpur.
10. Prassana Match Factory, 30, Becharam Dewri, Dacca.

INDIAN MATCH MANUFACTURERS' ASSOCIATION.

(Established 1923.)

7, BISWAKOSH LANE, BAGHBAZAR, CALCUTTA, DATED 15TH JUNE, 1927.

Scheme.

It has been suggested that factories financed by Indian capital are unable to continue competing with those financed by foreign capital. The remedy suggested by the Association is that a discriminating excise at the rate of

annas eight per gross be imposed on the products of factories financed by foreign capital, the amount of the excise to be raised on the products of those financed by mixed capital being proportionate to the amount of foreign capital invested.

In order that factories liable to pay the excise may not evade payment, it is suggested that the following interpretation of the term "Foreign Capital" be accepted:—

"Any capital not subscribed in India by Indians or people domiciled in India should be treated as foreign capital."

An Indian factory to be exempted from payment of any excise will have to show, in addition, a directorate, at least three-fourths of which will be Indian (including foreigners genuinely domiciled in India).

We suggest that it should be ruled that every factory (excepting cottage industries manufacturing without the aid of motive power) shall make an annual declaration, producing its books in support, to obtain a certificate from the appointed authority, whatever it may be, according to which it will be made to pay the excise or wholly or partly exempted.

In addition to the imposition of the excise proposed, some other steps would have to be taken to enable cottage producers to survive in the face of the competition of mass production, and it is suggested that they may take the shape of:—

- (a) A small bounty for a short period of, say, 5 years, at the rate of 4 annas per gross of matches.
- (b) Financial help by the Government for the formation in each province of a co-operative organisation for buying and selling matches manufactured by cottage industries, and for selling raw materials to all manufacturers. The Department of Industries in each province should offer all possible help, including facilities for extraction of wood and transport, helping also by establishing factories near forests in connection with the above co-operative organisation, for manufacturing splints and veneers to be sold at cost price including the depreciation of machinery, etc., to all who may want them, specially to cottage industries.

As an alternative proposal the Association makes the following suggestion:—

1. It has been said that Government are losing heavily in consequence of the development of the Match Industry in India. The retail price of Swedish matches, which used to be imported in large quantities a few years ago, and which are still being comparatively largely imported, is one and a half pice per box. This means that the retail dealers sell them for Rs. 3-6-0 per gross, whereas the wholesale price is about Rs. 2-12-0, so that there is a margin of 10 annas for the distributors to earn.
2. This is a very big margin, specially for such an important article of daily use. The distributors will, no doubt, feel induced to sell them at a lesser margin. In fact the pre-war price used to leave them a very narrow margin of profit, varying between As. 1-6 to As. 2-0 per gross of imported matches.

It may be suggested, therefore, that the Customs duty on matches be raised to Rs. 1-12-0 per gross; this will still leave them a margin of As. 6-0 per gross, which is undoubtedly ample. Simultaneously an excise of annas 4 should be raised from all factories in India (excepting cottage industries financed by Indian capital) and so 12 annas (i.e., 8 annas discriminating or protective excise we are suggesting *plus* the 4 annas corresponding to the additional import duty) on factories financed by foreign capital. If this suggestion be accepted the difficult question of bounties would not arise because it would give sufficient protection to cottage industries, and, as explained, consumers too would certainly be able to get a box of foreign matches for 1½ pice as now.

THE INDIAN MATCH MANUFACTURERS ASSOCIATION, CALCUTTA.

B.—ORAL.

**Evidence of Captain J. W. Petavel, Messrs. K. C. Sen, T. N. Gupta
and S. C. Majumdar, recorded at Calcutta on Tuesday,
the 18th October 1927.**

Introductory—Wood Supply.

President.—One of the conditions laid down by the Fiscal Commission for the grant of protection to an industry was that there should be an adequate or ample supply of raw material available and we have been enquiring from the manufacturers on the subject of the wood supply for matches in Calcutta. We would like to put a few questions to the Association. We understand in Calcutta the match manufacturers use genwa from the Sundarbans.

Mr. Gupta.—Yes. Some also use Andaman and Siberian logs. But Siberian logs are coming less and less day by day. We also think that within a short time it will cease coming in India altogether.

Dr. Matthai.—Where they do not use genwa what kind of wood do they use?

Mr. Gupta.—Papita and bakota from the Andamans. We get them from Messrs. Martin & Co.

President.—Which do you find the best?

Mr. Gupta.—Bakota.

President.—As regards the supply of genwa we understand that that is scanty at present and is getting scantier.

Mr. Gupta.—Recently we are feeling a little shortage; before that we were getting plenty of it and now although the supply is sufficient sometimes it becomes short on account of water level being low and sometimes by the boats being stopped by canal officers at the lock gate and consequently price goes up.

President.—What is the price?

Mr. Gupta.—Last year at this time it was something like 8 to 10 annas, this year it was all this time about Re. 1 per log, that is, about Rs. 50 a ton, but now it has again come down to 8 to 9 annas per log.

Dr. Matthai.—What is the average size of a log in cubic feet?

Mr. Gupta.—One cubic foot or a little more that is what we got from a log selling for 8 to 9 annas. (The rate varies between 8 annas and Re. 1 per piece.)

President.—We were also told that in the hot weather owing to the time it takes to bring wood up from the Sundarbans a great deal of it becomes useless for match making?

Mr. Gupta.—We cannot use all for splints, but for boxes it is all right; we boil it and make it soft.

Dr. Matthai.—What precisely is the difficulty?

Mr. Gupta.—It gets rather dry.

Dr. Matthai.—If it gets dry the difficulty is with regard to peeling it, is it?

Mr. Gupta.—Yes, it breaks and becomes discoloured.

Dr. Matthai.—What kind of colour does it assume?

Mr. Gupta.—It has blackish spots.

Dr. Matthai.—It is rather dark and when it gets dry it gets darker still?

Mr. Gupta.—That is so.

President.—Do you consider *geuwa* a satisfactory wood for manufacturing matches?

Mr. Gupta.—For boxes it is all right, but wastage is more when the girth is smaller.

President.—We were told that it makes about 2 gross of matches per cubic foot.

Mr. Gupta.—It would be about that.

President.—With the Andaman wood you get about 2½ gross.

Mr. Gupta.—More. I would put it roughly at 3 to 4 gross, splints and veneers complete.

President.—We were told in Burma it was 3 gross.

Mr. Gupta.—From *bakota* I can get 3 to 4 gross, but from *papita* it is less.

President.—As regards splints do you find it satisfactory for that.

Mr. Gupta.—It is marketable but it is not so satisfactory as *bakota*.

President.—Mr. Sen Gupta told us that he considered *genwa* quite useless for splints.

Mr. Gupta.—We have all along been using it and the public are agreeable to buying splints of that wood.

President.—It is being used, but he expresses the opinion that it is of very little value.

Mr. Gupta.—He may not have a liking for these.

Dr. Matthai.—What he told us was that his experience was so disappointing that he gave it up.

Supplies from the Andamans—Messrs. Martin & Co.

President.—As regards the wood from the Andamans we believe that what is known as *sawbya* in Burma is the same as *papita*, and we were told in Burma that *sawbya* gave satisfactory results. Messrs. Adamjee Hajee Dawood & Co. have turned out very excellent matches from this wood. But the *papita* we saw this morning was extremely brittle.

Mr. Gupta.—In the beginning we were getting wood direct from the Forest Department in the Andamans but more recently Messrs. Martin & Co. who have got a monopoly, and who are the sole agents, are selling the old stuff and they soak it in water to keep it soft and it therefore becomes brittle when used as splints. If we got it from the Forest Department direct it would be much better than *genwa*.

President.—Do you think *papita* as good as *bakota*?

Mr. Gupta.—No, but a little better than *genwa*.

President.—Did you investigate the question of supply in the Andamans?

Mr. Gupta.—I went to the Andamans about a month ago.

President.—You saw the forest officer there?

Mr. Gupta.—I saw the Chief Conservator. I saw the forest area. They have got every arrangement for supplying a fairly large quantity. But the trouble is now that there is an agent in Calcutta. The forest officer told me personally that he could supply me about 500 tons a month if a contract was made, but the trouble is that we have to approach them through Messrs. Martin & Co., their agents in Calcutta. I approached Messrs. Martin & Co. but they would not make any contract owing to some misunderstanding.

Dr. Matthai.—What precisely is the position? If you are prepared to make a contract with the forest authorities in the Andamans, say for a monthly supply of 500 tons of wood even then would it be necessary for you to go through the agents?

Mr. Gupta.—Yes. Under their agreement Government cannot enter into any direct contract.

Dr. Matthai.—Their arrangement with Messrs. Martin & Co. is that all supplies will have to be made through the agents, is that so?

Mr. Gupta.—Even contracts have to be entered into with Messrs. Martin & Co. They cannot undertake to supply wood direct to other parties, they must do it through Messrs. Martin & Co.

President.—Are Messrs. Martin & Co. the sole agents for forest produce in the Andamans?

Mr. Gupta.—Yes, for Calcutta.

President.—Do they sell on commission?

Mr. Gupta.—Yes.

President.—How is the price fixed?

Mr. Gupta.—It is suggested by Messrs. Martin & Co. after local enquiry. When we were getting direct we were getting the wood at a very low rate, Rs. 37-8 *ex-ship* Calcutta, but Messrs. Martin & Co. interfered and raised the price to Rs. 55. And we are not getting *ex-ship* delivery; they are taking the timber to their Shalimar yard so that by the time we get them they become almost useless because it takes a long time to get delivery.

Dr. Matthai.—How long ago did you get the wood at Rs. 37-8?

Mr. Gupta.—About 2½ months back. Our supply was stopped by Messrs. Martin & Co. They said they could manage to fetch a better price and suggested to Government that the price should be increased to Rs. 50 to Rs. 60. They are now selling at Rs. 52 to Rs. 55. Formerly we were getting the log quickly as soon as the ship came into the docks. Now they are taking it to their yard where they take the measurement and go through other formalities with the result that it is kept there for a long time till it becomes dark and brittle.

Dr. Matthai.—This wood that you recently got and which you found unsatisfactory, how long had it been with Messrs. Martin & Co.?

Mr. Gupta.—It was about a month with Messrs. Martin & Co.

Dr. Matthai.—And it takes about a month to get delivery here?

Mr. Gupta.—He gave me delivery from old stock.

Dr. Matthai.—The boats call here once a month?

Mr. Gupta.—Sometimes once, sometimes twice.

Dr. Matthai.—That is to say 1½ to 2½ months from the time of extraction you get it here, is that right?

Mr. Gupta.—Yes.

Dr. Matthai.—And in the course of two months it gets absolutely spoiled?

Mr. Gupta.—Yes.

Dr. Matthai.—The delay with Messrs. Martin & Co. is about a month and the time taken in transportation is about a month?

Mr. Gupta.—Yes, about that, sometimes more. After 3 months it becomes absolutely useless.

President.—It takes time for extraction from the jungle?

Mr. Gupta.—Yes.

President.—Messrs. Martin & Co. has been agents for the Forest Department in the Andamans for a number of years?

Mr. Gupta.—Yes.

Dr. Matthai.—Is it that Messrs. Martin & Co. sell this wood at a particular price, say, about Rs. 60 per ton and on that they get a certain commission, or do they get it at a wholesale price and add middleman's charges and so raise it to Rs. 60?

Mr. Gupta.—No, they charge something like 5 per cent. commission, but they dictate the price to Government who finally fix the price.

President.—That means that the more match factories there are in Calcutta the higher the price of the wood.

Mr. Gupta.—Yes.

Dr. Matthai.—Recently I understand there has been difficulty with genwa and that has increased the demand for Andaman wood?

Mr. Gupta.—Yes. They can fix one price for all customers. But I understand that they sell at Rs. 50 to someone and at Rs. 55 to another; there is no uniformity in their price in the market.

President.—What about the supply of this wood? We understand from the Chief Conservator's letter that only about 6,000 tons can be transported annually because of the difficulty of shipping.

Mr. Gupta.—Recently they were making arrangements for more ships. They gave us to understand that they sent a report to the Government of India that there is a future prospect for this wood and asked whether they would increase the number of ships running between the Andamans and Calcutta.

President.—There is no inward cargo to the Andamans so that a ship which goes out to bring the match wood has to cover all its expenses from the freight on the cargo which they bring back from the Andamans.

Mr. Gupta.—They take food for the convicts and other things.

President.—I will quote from the Conservator's letter. He says: "The freight of timber will be too high to allow large quantities to be exported as there is very little cargo." Then he goes on to say "I estimate that 5,000 to 6,000 tons could be exported annually at present and 5 or 6 times that amount if sufficient transport to India or Burma were available." So that the question seems to be whether if they started export on a large scale the price they get in Calcutta would be sufficiently remunerative to cover the expenses of running the ship. That seems to be the crux.

Mr. Gupta.—I see what you mean.

President.—How do Messrs. Adamjee Hajee Dawood & Co. ship their wood?

Mr. Gupta.—To Rangoon they export only one kind of timber that is the match timber but to Calcutta they are sending scantlings, beams and so on and if there is any more space left then only they ship match timber.

President.—Is the Government boat under the control of the Forest Department?

Mr. Gupta.—It is under the Chief Commissioner.

President.—Have you made any enquiries from the Andaman Government as to the rates of freight which would be remunerative?

Mr. Gupta.—It is fixed at Rs. 12-8 a ton.

President.—That is all right for present purposes. I understand the Association wants an additional number of boats to run. The question will naturally arise whether the freight would cover the expenses. On that question have you gone into the matter with the Government there to see whether the price of match timber would be sufficient to cover both the expenses of shipping and the royalty.

Mr. Gupta.—We made a calculation ourselves and are satisfied that the cost of the match timber is Rs. 21-12 at most including Rs. 6-4 per ton as royalty, up to Calcutta. Therefore you will see that Government makes about 150 per cent. profit on match timber. This is too excessive, especially when it is borne by a nascent industry like ours. There is a schedule of royalty in respect of each wood in the Forest Department and for papita and bakota it is fixed at Rs. 6-4 per ton. That too is very high. Government should give us a substantial reduction in the royalty and allow us to work the forests ourselves to enable us to reduce the cost of production. If this is done, we can assure you that within 5 years or say 7 years at the most we shall be able to compete with the world market. In Central Provinces and in Gujarat such concessions are allowed in respect of wood to match factories by the Forest Departments there and there is no reason why the Andaman Forest Department should not give us similar concessions. There are contractors in the Andamans who can supply match wood at a reduced price, in fact they actually exported several consignments for a certain member of

this Association at a rate somewhere in the vicinity of Rs. 35 per ton including freight, *ex-ship* Calcutta, but soon after a few consignments had arrived, the authorities stopped receiving any more wood for shipment to Calcutta from them and began to export it on their own account to their Agents in Calcutta to sell it. They, however, raised the price at once without any rhyme or reason, so far as we can see, to Rs. 56 per ton *ex-yard* delivery. It is for you to say whether it is fair on the part of the authorities of the Andamans to throttle competition in this manner.

President.—It would be worth your while to approach the Government on the subject.

Captain Petavel.—Mr. Gupta has gone into the question thoroughly.

President.—As a matter of fact provided you got ample supplies of wood and it arrived here in good condition, you would probably not grumble at a price of Rs. 55 a ton.

Mr. Gupta.—If I get bakota, I won't grudge paying Rs. 50 or Rs. 55.

President.—So that it is really a question of arranging between the match manufacturers in Calcutta and the Forest Department in the Andamans and for that purpose your Match Manufacturers' Association would be the best agency to take up the question.

Mr. Sen.—Yes, but the Government are already committed. Messrs. Martin & Co. are their agents and when getting the supply through the agency of Messrs. Martin & Co., the wood gets dry.

President.—That will only be so long as the present contract lasts. It won't last indefinitely.

Mr. Gupta.—The Chief Forest Officer says: "As regards Calcutta, I can't say anything. Please go to Messrs. Martin & Co. They will do everything." Messrs. Martin & Co. say: "These are market rates. If you agree we can supply you from the stock." They are stocking and stocking. At present they have about 500 tons in their stock.

President.—No one will buy it?

Mr. Gupta.—I don't think anybody will buy and throw away his money.

President.—It is only a question of a few months. They will grow wise when they find that this timber, if kept long, will not be suitable for match manufacture and if you go in 2 or 3 months' time and represent your case, perhaps they will listen. Everybody connected with match manufacturer knows that you have to use fresh wood.

Captain Petavel.—The Director of Industries might help us in the matter.

Mr. Gupta.—The Government have already made a contract with Messrs. Martin & Co. and I think they may not help us so long as the contracted period is not over.

President.—If the Director of Industries interviews Messrs. Martin & Co. and explain the process of manufacture and that this wood if stocked for any time, is useless for the purpose of match manufacture, perhaps the firm might be inclined to import at regular intervals and sell the wood in fresh condition.

Captain Petavel.—We will see Mr. Weston about it.

Dr. Matthai.—You said you have seen the terms of the contract.

Mr. Gupta.—Yes.

Dr. Matthai.—How long will that contract last?

Mr. Gupta.—I understand it is a three years' contract.

Dr. Matthai.—It is a three years' contract with Messrs. Martin & Co.

Mr. Gupta.—Yes.

Dr. Matthai.—If this contract would expire shortly and then the Indian Match Manufacturers' Association decided to combine their various demands and were in a position to present a fairly large indent to the Forest Department in the Andamans, you might be able to get your supplies direct at a lower price?

Mr. Gupta.—As far as I remember 18 months have already passed and there are only about 18 months more.

Dr. Matthai.—It is not a very long time.

Mr. Gupta.—I can ascertain this information.

President.—In the meantime the position seems to me to be this. It is in the interests of Government and also of Messrs. Martin & Co. to sell this wood at Rs. 55 a ton. Provided they get it out fresh at regular intervals, the match manufacturers in Calcutta would be quite pleased to take it at that price. Therefore it seems to me that it is in everybody's interest that the wood should be brought over at regular intervals and sold at once. If the case is properly put before the Government agents, they would probably see their way to doing it.

Captain Petavel.—The Director of Industries may help us there.

Dr. Matthai.—At present the price is somewhere about Rs. 55 which is about Rs. 18 more than the price at which you were able to get it direct a few months ago. I suggest—I should like your opinion on it—that part of the reason why Messrs. Martin & Co. are able to put up the price to Rs. 55 is that there is a great deal of competition among you match manufacturers here for the wood. Is that not a matter for which the Match Manufacturers' Association could find a remedy without waiting for the expiry of the contract?

Mr. Gupta.—You mean that we should not compete amongst ourselves.

Dr. Matthai.—You could combine and go to Messrs. Martin & Co. and say this is the price which we are prepared to give you.

Mr. Gupta.—Other people who are not our members are also buying bakota. For instance the Western India Match Company, Mitsui Bussan Kaisha and N. M. Mehta are all buying this.

Dr. Matthai.—Supposing the Members of your Association were in a position to combine, what would be your total demand per month?

Mr. Gupta.—We would require about 500 tons a month.

Dr. Matthai.—Which of course would be a fairly big proposition to place before Messrs. Martin & Co.

Mr. Gupta.—They will say "We are getting market price; why should we enter into any contract with any party for any quantity at any fixed price."

Dr. Matthai.—That is not the question. When a consumer wants as big a quantity as 500 tons a month, to some extent he is in a position of advantage. It is not a small quantity.

Mr. Sen.—The supply is so small that they don't care to sell it to any particular customers.

Dr. Matthai.—That is not altogether true. You are complaining that they are having too large a stock at present.

Mr. Gupta.—There are two species, papita and bakota. They didn't sell papita first. They were keeping it in stock. They didn't know that if it were kept in stock for a long time, it would be quite useless. I think they didn't know anything about this. They were simply putting up their price and from Rs. 37 they raised it to Rs. 50, then to Rs. 52 and then to Rs. 55 and now they are demanding Rs. 57.

Dr. Matthai.—That is to say they decided to keep these logs in stock and waited to get a better price.

Mr. Gupta.—Yes.

Dr. Matthai.—Now that they have discovered the mistake, their price will go down. To that extent the position will right itself.

Mr. Gupta.—They may reduce their price for the dried wood I think. But there is no more buyer now to buy it.

President.—But even so, you would still not be able to get sufficient wood unless more steamers are employed in the trade.

Mr. Gupta.—That is right.

President.—So that you would still have to go into the question of freights and see whether the freights would cover the cost of running additional boats.

Mr. Gupta.—The Government ships carry only timber to Calcutta. Timber is the main product of the Andamans. When all other timbers are paying, why should not this match timber which has got a ready market. As regards other timber Government have to keep a depôt, but so far as the match timber is concerned, they don't require any.

President.—That is true. The position is that they have got to keep one boat to carry stores to the Andamans now. When that boat comes back, it brings other timber as well as a certain amount of match timber. If you are going to ask that more boats should be employed for this purpose than are required to carry stores, naturally the freight on match timber and other kinds of wood must be sufficient to cover expenses.

Mr. Sen.—We don't know what their freights are going to be.

President.—No definite conclusion could be formed until the probable future price of match wood in Calcutta is known.

Mr. Gupta.—Do you want to know the price of match wood?

President.—If the local authorities can depend on a price of Rs. 55 or Rs. 60 per ton for match wood in Calcutta, then they would be in a position to consider whether it would be an economical proposition or not to ship it or not.

Mr. Gupta.—If we get bakota logs we will be ready to pay Rs. 50 to Rs. 55 a ton. For papita, which we can't keep for a long time, the maximum that we can pay is Rs. 40 a ton.

Sources other than the Andamans.

Dr. Matthai.—Are you aware of any other kind of wood in Bengal which may be suitable for the manufacture of matches than genwa?

Mr. Gupta.—We know there are many varieties, but they are not available.

Mr. Sen.—The supply of other wood is not plenty.

Dr. Matthai.—Have your members experimented on it?

Mr. Sen.—Yes. I had a book written on this to which is appended a list of wood suitable for the manufacture of matches.

Dr. Matthai.—If the supply of genwa fails, then as far as local woods are concerned, you cannot depend on a sufficient supply.

Mr. Gupta.—Calcutta factories can't.

Dr. Matthai.—Apart from genwa, it is a question of getting wood from the Andamans.

Mr. Sen.—Yes, that the supply of genwa wood is abundant and will last many years besides there is aspen wood from abroad as the last resort.

President.—Have you considered the question of getting wood from Burma?

Mr. Gupta.—We understand the Burma factories are getting wood from the Andamans.

President.—They are getting wood from the Andamans, but there are considerable supplies of match wood in Burma and there are large wood companies too in Burma.

Mr. Gupta.—We are now in correspondence. We have been making enquiries recently.

President.—I was wondering whether the demand would be sufficient to make it worth while to export wood from Burma. Have you tried Assam?

Mr. Gupta.—We tried from Assam. The main thing there is freight which is too much.

President.—Do you mean the river freight?

Mr. Gupta.—The steamer freight is too much. They charge something like Rs 31-4 per ton to carry it from Assam to Calcutta. From Japan it is less.

Captian Potavel.—It is due rather to the present insecurity. If there were more certainty, future arrangements might be made which are not possible now. The question is whether we can go on, so that, in the present position of insecurity, we are debarred from making arrangements which otherwise might be possible.

President.—There is no reason why the Association should not enquire and find out what is possible.

Mr. Sen.—The Association consists of manufacturers of matches. They are trying to keep their heads above water. They are just going along the beaten track, anyhow dragging on.

President.—These enquiries cost you nothing.

Mr. Sen.—Their mind is not easy. They are all so anxious about seeing the industry well established in this country. So that they may reasonably plan ahead.

Dr. Matthai.—Unless it was a question of starting artificial plantation, I don't see why the absence of protection should cause any anxiety or any feeling of insecurity. I could understand that you would be unwilling to start a plantation if there was some fear protection might be withdrawn next year, but as for ascertaining the possibility of getting supplies of wood from existing sources, I don't see why there should be any feeling of insecurity.

Mr. Sen.—We are trying individually but the existing conditions are causing general depression.

Dr. Matthai.—The Association has made no endeavour to find that out.

Mr. Sen.—No, but the members individually are trying.

Dr. Matthai.—It is a matter which could more effectively be undertaken by the Association.

Mr. Sen.—Recently we have decided to take up this question.

Dr. Matthai.—The difficulty with which we are faced, as the President was pointing out, is this. Apart from any question of plantation, supposing it is found that you people here are, after all the enquiries that you have made, unable to raise a sufficient supply of wood for the match factories in Bengal, then even if we grant protection to your industry, you may not be able to get your raw materials and we may be protecting an industry for which there is no future in the country. You must be able to give an answer to that question.

Mr. Sen.—Genwa is essential for the Calcutta factories, but in the mofussil there are lots of local woods which can be used. They will not be as good as papita or bakota or I might say even as first class genwa. As regards Calcutta factories we are sure even if other things fail, we can have supplies from Siberia.

President.—That is aspen.

Mr. Sen.—Yes.

President.—Then you would not qualify for protection if you are using foreign materials entirely.

Mr. Mazumdar.—There are lots of forests in Assam. Abundant quantities of wood can be had from that province.

President.—We have just been told that the Assam wood is all right, but that freight is so expensive as to make it unremunerative to manufacture matches from it.

Mr. Gupta.—We are thinking of making our own arrangements to float the wood from the forest area to Calcutta. If we are successful we will get plenty of wood.

President.—You mean you will raft it.

Mr. Sen.—Yes. If I remember right, Sir Charles Innes in his speech in the Council of State in introducing the new tax on the importation of splints and veneers said: "If the wood is imported from Sweden or Japan and if

the splints are cut in this country and if the veneers are made in this country then that will be a genuine industry."

President.—The present duty is a revenue duty and not a protective duty at all.

Mr. Sen.—No.

President.—The question of protection has never been considered by Government.

Mr. Sen.—Not so far.

President.—Of course we are bound by the terms of the Fiscal Commission, one of the conditions laid down being that there should be an ample supply of raw material.

Captain Petavel.—We have as yet not considered the paucity of wood as a great impediment. I think we are pretty sure we can get wood in one way or another if we co-operate. Bengal is favourable for the growth of good genwa—when really good it is excellent for the industry. There need therefore be no difficulty about the raw material.

Mr. Sen.—In a book written by Mr. Troup a heavy list of wood suitable for matches and available in India is appended.

President.—Mr. Troup's book is out of date.

Mr. Sen.—In the matter of machinery and methods but not raw materials. I find many things as up to date as if it was written yesterday. Mr. Troup had great foresight.

Dr. Matthai.—We have been told by many people who are familiar with the subject that a great many of Troup's statements have been disproved.

Mr. Sen.—Once more they are in the respects I have mentioned. But there are many which would still hold and will continue to.

Dr. Matthai.—You are speaking of Troup's book. The kind of wood Mr. Troup recommended generally for most provinces was simul. What are the possibilities of that in Bengal?

Mr. Gupta.—It is available in Assam.

Dr. Matthai.—Don't you have it in Bengal?

Mr. Gupta.—There is in Bengal, but it is scattered.

President.—It is available in Jalpaiguri in the Buxa forest range?

Mr. Gupta.—Yes.

Splint and Veneer factories in the forests.

Mr. Sen.—Another arrangement can be made. If we can have our splints and veneer manufacturing factories in the wood area, we can bring them Calcutta and finish them here.

Dr. Matthai.—Do you think it would work?

Mr. Sen.—Yes. The freight would be reduced to a large extent.

Dr. Matthai.—But you will have to run two establishments.

Mr. Sen.—Yes. Here too we have got to manufacture splints.

Dr. Matthai.—Have you any experience of that?

Mr. Sen.—No.

Mr. Gupta.—As a matter of fact if it is done on a big scale, it will, I think, be paying.

President.—Both the Western India Match Company and Messrs. Adamjee Hajee Dawood & Co. who are run on a fairly big scale have considered this question. Except in Japan this system of manufacturing splints actually in the forests has not been adopted anywhere.

Mr. Sen.—Have they any practical experience? Did they ever undertake that?

President.—The Swedish Match Company have some considerable experience in match manufacture.

Mr. Sen.—But Indian conditions are different. Mr. Gupta is running two factories. He is thinking of running a separate factory in a place where wood is very cheap.

Dr. Matthai.—What part of Bengal?

Mr. Sen.—In Assam where there is plenty of wood.

Dr. Matthai.—Are you speaking of a factory which is now in existence?

Mr. Sen.—No.

Dr. Matthai.—Is there any of your members who has had actual experience of two separate factories?

Mr. Sen.—None that I know of.

President.—Some difficulties have been suggested to us. First of all in the jungle if you are going to establish a factory on a large scale, there would be considerable difficulty in getting labour; especially the skilled labour working in match factories might not agree to stay. That is one of the difficulties. Another difficulty is in regard to repairs. Your match machinery is rather delicate.

Mr. Gupta.—Yes.

President.—You have to maintain a workshop in the jungle to repair your machinery. You will also have to maintain a duplicate workshop here.

Mr. Gupta.—Before the Calcutta factories were started, splints were coming from Japan. So, if there is no wood available in Calcutta, then there will be no other alternative but to go inside the forest and start a big factory which will supply splints to all the others.

Mr. Sen.—It will be a separate unit altogether.

Captain Petavel.—That is one of our suggestions.

Mr. Gupta.—In that case the cost of production of splints won't be more. As for myself I can say that I have got a separate concern. I am only selling splints and veneers to cottage industries and my cost of production is much less than the cost of production of any other factory.

President.—The Board does not want to discourage you. But it is desirable to point out the more obvious difficulties in the way so that you may consider them before you arrive at any conclusion.

Dr. Matthai.—On what scale do you work your veneers and splints? What is your output?

Mr. Gupta.—At present it is very small. It is only about 500 gross per day, but it was much more formerly I used to supply to Esavi India Match Manufacturing Company.

Dr. Matthai.—Is your factory in Calcutta?

Mr. Gupta.—Yes. Before Esavi's purchased their own machinery, they were buying veneers regularly, from me and splints from Japan.

Dr. Matthai.—At what price do you sell undipped splints?

Mr. Gupta.—Between Rs. 8 and Rs. 10 per maund according to quality made from genwa wood. I have submitted a scheme to the Governor of Assam proposing that I mean starting a splint factory in Assam if they give me certain facilities.

Dr. Matthai.—Could you give me the price in terms of splints required for a gross of boxes?

Mr. Gupta.—Surely I can. About 2½ maunds of splints are required for 100 gross of matches.

Dr. Matthai.—That is to say, one maund represents 40 gross.

Mr. Gupta.—About that.

Dr. Matthai.—For 40 gross it works out at about Rs. 10, and for a gross it is about four annas.

Mr. Gupta.—Yes.

President.—Four annas a gross?

Mr. Gupta.—For ready made splints.

President.—The argument that somehow or other wood will be found to carry on is hardly convincing. For the wood must be of suitable quality, otherwise the third condition laid down by the Fiscal Commission namely that the industry must be able to stand eventually without protection, could not easily be fulfilled.

Mr. Sen.—Yes, after some time but as explained, Bengal could grow any amount of thoroughly suitable genwa.

President.—After 20 or 30 years. But if you are going to make splints out of genwa wood, will you be able gradually to reduce your cost to Re. 1-4-0 which is approximately the price (inclusive of everything except the duty) at which the Swedish people land their matches at present in India? You must remember too that you will be competing with genwa wood against aspen wood, and the quality of the matches will be different.

Mr. Gupta.—As for ourselves we are thinking of making boxes out of genwa wood and for splints we are thinking of making other arrangements. If we get the Andaman wood, it is all the better, but if we don't get it, we will go to Assam or to the border of Nepal. We sent our man there to investigate the question of supply. Either in the Nepal border or in Assam we will try to start a splint factory or we will try to get wood from Assam by floating. As it is, the cost of transportation is very heavy.

President.—When you have made arrangements, will you please let us know?

Mr. Gupta.—Yes. We saw the forests and made all the arrangements. But the only thing to be arranged for is to bring the wood to Calcutta. We have established ourselves in Calcutta and it is a big undertaking to shift and start at once manufacturing splints in Assam. But if it must be done we shall do it.

Dr. Matthai.—You might keep us informed of the results of your enquiries from time to time.

Mr. Gupta.—Yes, I will.

Chemicals.

President.—Then as regards some of the chemicals, some of the manufacturers here are, I find, paying as much as 50 per cent. above the price at which Messrs. Adamjee of Rangoon obtain them.

Mr. Gupta.—Some of the members of the Association whose productions are small are paying more than big factories.

President.—Take the case of the Bhagirathi Match Works. They are paying much more than Messrs. Adamjee.

Mr. Gupta.—We are paying more, but I do not know the prices paid by Messrs. Adamjee Hajee Dawood and Company.

President.—You must be buying retail I think.

Mr. Gupta.—Yes, to a very great extent.

President.—These are their rates (handed in). Many of them work out considerably less.

Mr. Gupta.—I think that they have made arrangements to import direct.

President.—They purchase direct from Europe.

Mr. Gupta.—We are getting our supplies mainly through the Match Manufacturing Supply Company started by the Western India Match Company.

President.—Our suggestion is this. As your Association represents a large number of factories, it is better for the Association to combine the demand and import direct from Europe.

Mr. Gupta.—Yes, we will try to do so.

President.—We find the Bhagirathi Match works paying four annas per gross of matches for chemicals, whereas Adamjee's pay only Re. 0-2-6. There you can save Re. 0-1-6 per gross. There is no reason why you should not combine together and place the orders direct with the manufacturers in Europe.

Mr. Sen.—From seven annas in 1923 the price of chemicals had been brought down to four annas.

President.—I daresay that Adamjee's costs are still lower now.

Dr. Matthai.—Don't you think that it is a matter of importance that from the point of view of small manufacturers whom your Association mainly represents, the Association should take co-operative action on their behalf?

Mr. Gupta.—We have taken up this question only recently.

Mr. Sen.—We had about 50 small concerns in Calcutta. But there are only about six or seven of them left now.

Dr. Matthai.—How many members have you?

Mr. Sen.—We have about 18 or 20 in Calcutta.

Dr. Matthai.—The largest size being how much?

Mr. Sen.—1,000 gross a day which is the output of Karimbhoy Match Manufacturing Company and the Pioneer Match Factory.

Dr. Matthai.—What is the smallest size?

Mr. Gupta.—50 gross a day.

Cottage factories.

Dr. Matthai.—Your Association represents not merely factories run with hand driven machinery but also factories run with power driven machinery.

Mr. Gupta.—Yes.

Dr. Matthai.—You don't represent specially the cottage industry.

Mr. Gupta.—No.

President.—Do you think that it would be reasonable to define a cottage industry as an industry which does not come within the definition of a factory under the Factories Act.

Mr. Gupta.—I don't think that it would define it properly.

President.—That is to say, if a concern does not employ more than 49 men and has no motive power, it would be considered a cottage industry.

Mr. Gupta.—Motive power is the main thing.

Mr. Sen.—May I suggest that we will submit our views about the definition of a cottage industry later?

Dr. Matthai.—You make some suggestions in your representation particularly regarding the cottage factories and I suppose that when you made this representation your idea of a cottage factory was a factory which manufactured without the aid of motive power.

Mr. Sen.—Yes.

Dr. Matthai.—Without any reference to the amount of labour employed?

Mr. Sen.—Yes.

Dr. Matthai.—Actually if you take the cottage factories which are run without motive power, is there any factory which produces more than 100 gross a day?

Mr. Sen.—I don't think so.

Dr. Matthai.—As far as a match factory without motive power is concerned, supposing you limit the output to 100 gross a day, there would not be more than 50 people employed?

Mr. Sen.—To manufacture 100 gross a day by hand would require more than 50 people. Some families are engaged working in their homes.

Dr. Matthai.—The family need not do it on the premises. They may do it in their homes.

Mr. Sen.—If you exclude them, then of course 50 would be just about sufficient.

Dr. Matthai.—That works rather satisfactorily.

Mr. Sen.—Yes, if you leave out the families.

Dr. Matthai.—If on the ground of convenience we say that the definition of a cottage factory given in the Factories Act might be applied in your case, you don't think that it would cause any hardship, as things stand at present?

Mr. Sen.—No, but we should not like rule (b) given in the Factories Act to be applied, *viz.*, "Government may declare at any time" If they don't do that, we will have no objection.

Excise Duty—Existing Customs Duty.

President.—We should like your opinion on the proposal put before us this morning. In the event of the industry being found not qualified for protection our terms of reference require us to consider to what extent account should be taken of vested interests which may have accrued to manufacturers on account of the fact that the Re. 1-8-0 revenue duty has now been in force for some years and to what extent the loss of revenue can be made good by an excise duty or other appropriate form of taxation. It was suggested this morning that a reasonable excise duty might well be levied on all factories in India.

Captain Petavel.—We have suggested a discriminating excise.

Mr. Sen.—Without it, we don't want anything of that sort because it would be ruinous to us whether the present duty is continued as a protective or a revenue measure.

President.—One of the reasons given to us for this proposal was that a four annas excise duty would not affect the manufacturers but that it would merely go to reduce what was stated to be the excessive profit made by the middlemen.

Mr. Sen.—We have mentioned that.

President.—That would be the position generally speaking.

Mr. Sen.—If the foreign factories in India and we ourselves were taxed equally we would then be in the same position as they and we should in that case not be able long to survive.

President.—Do you mean that you will not be able to carry on with a duty of Re. 1-8-0?

Mr. Sen.—If the first proposal we have submitted for your consideration is not found acceptable we can carry on if an additional duty of four annas is placed on the imported matches, thus raising it to Re. 1-12-0, an excise duty of four annas is indiscriminately levied on all Indian factories, and annas twelve on factories financed by foreign capital as per our second proposal.

President.—I am coming to that later. I am now on the question of the present duty. Re. 1-8-0 gives you protection of something like 120 per cent. Considering the matter purely from the point of view of protection, I would point out that for no other industry has the Board proposed so high a rate.

Mr. Sen.—If the import duty is raised to Re. 1-12-0 it would not affect the consumer. The retailer must sell for a current coin. He could not get 2 pice a box so the amount now earned by the middleman would be reduced. I point out in the connection that formerly the distributor was satisfied with the packing case and very little if any more. In a word they used to sell at their cost price and the packing case was their profit. Now they are making great profit whereas the manufacturer is making none at all. Thus it is that if the import duty is raised to the figure suggested it will not touch the consumer at all. The lowering of the duty however will injure the people who ought to be protected.

President.—I am merely putting this for the sake of argument; I do not wish to commit the Board in any way. The usual procedure when we make a recommendation as regards protection is to ascertain what is the fair selling price for the Indian manufacturer compared with the import price without duty of the imported goods and the difference between that is regarded as the

measure of the protective duty. If we were to adopt that system without any modification at all with regard to matches, you would see that the protective duty might be reduced considerably below Re. 1-8-0. On the other hand—if it is found that the industry does not qualify for protection and the question is considered entirely from the point of view of revenue then if the revenue duty is raised from Re. 1-8-0 to Re. 1-12-0 and an excise duty of 4 annas a gross imposed, you claim that Government will get this extra 4 annas without causing any hardship to the consumer.

Dr. Matthai.—The assumption being that this extra 4 annas will be paid by the middleman.

Mr. Sen.—Yes.

Dr. Matthai.—Take the wholesale price of imported matches at Rs. 2-12-0 for the sake of argument. At present the retail price of that will be Rs. 3-6-0, that is a difference of 10 annas. You put on an extra duty of 4 annas; that brings the wholesale price to Rs. 3-0-0. Is there anything to prevent the middleman from raising the price? I mean it is such a small difference when we come to the box.

Mr. Majumdar.—It will be about 1½ pice per box.

Dr. Matthai.—Supposing it was raised to Rs. 3-12-0 what would be the price per box?

Mr. Gupta.—2 pice per box.

Dr. Matthai.—It would be an increase from 1½ pice to 2 pice per box if the retailer's price was raised from Rs. 3-6-0 to Rs. 3-12-0 or thereabouts, that is an increase of ½ pice per box. Do you think that would have an perceptible effect on the market?

Mr. Gupta.—Nobody would buy at 2 pice; they would prefer Indian matches. Now the difference between Indian matches and imported matches is ½ pice. If there is a difference of one pice nobody would buy the imported stuff so the middleman would be compelled to sell it at 1½ pice.

President.—I imagine that a large amount of matches is sold by the dozen?

Dr. Matthai.—The class of people who buy imported matches generally buy in small packets. If I am a smoker I would buy 10 boxes at a time.

Captain Petavel.—They don't do that generally.

President.—On the other hand my bearer might buy a dozen and supply me one at a time!

Mr. Gupta.—The general tendency is to buy one box at a time as matches are available almost everywhere, so that the increase would not affect the consumer.

President.—Do you think the cottage industries keep accounts of their stores and so on?

Mr. Majumdar.—We do only under important headings.

President.—If I went into your shop and wanted to know how many gross of matches you have manufactured per month would you be able to give me the information?

Mr. Majumdar.—At the end of the month I can give you the total for that month. We do not keep very accurate account, although we must keep an account of the amount we are producing roughly.

President.—If you are asked to submit to the Collector once a month the total outturn of matches would you be able to do that?

Mr. Majumdar.—Yes, we can do that.

President.—One suggestion that was put forward about the method of excise duty is that the match manufacturers should purchase from Government stamps beforehand and that no box of matches should be sold without a stamp being pasted around it. Do you anticipate any difficulty in a system of this sort?

Mr. Sen.—That will add to the cost of production.

President.—Do you consider there is any possibility of evasion in a system of that sort?

Mr. Sen.—The stamp can be taken off as soon as the box is sold and repurchased by the manufacturer through an agent who will collect this and repaste it on a new box. There is a possibility of evasion.

President.—Do you think that in the event of the excise duty being imposed in this manner, there is any possibility, in order to evade it, of splints already dipped being sold separately in a bundle with, say, a strip of paper round it?

Mr. Sen.—I don't think it is possible. Speaking about Bengal the place is so damp that you can't keep loose splints in your pocket without the risk of their deteriorating in damp weather.

President.—So you think there is a possibility of people having purchased one box replenishing it with splints?

Mr. Gupta.—There is that possibility.

Mr. Sen.—That can be done only to a limited extent by small factories but it won't pay those manufacturing on large a scale. Besides the striking surface wears down rapidly.

President.—I am thinking of the cottage factories. They can supply to people dipped splints without boxes.

Mr. Gupta.—I admit it would be difficult for Government to check.

President.—On the whole which system do you think would be the best, that is to say a monthly return sent to the Collector or a label?

Mr. Sen.—To charge per case. There may be some inspectors who will certify that so many gross of matches are produced in a day and the excise to be charged when the matches are actually sold.

President.—Would not that be an expensive way of administration? You will remember that the duty has been collected in the past by the Customs and your proposal would entail considerable extra expenditure.

Mr. Sen.—Part of it can be easily collected, *e.g.*, the duty we pay on chemicals and imported wood. There is only 4 annas with which you will have some difficulty.

President.—I understand when the cotton excise was collected the cotton factories were sending their returns once a month.

Mr. Sen.—If you can rely on them you can certainly do that; I hope they will prove themselves worthy of the trust.

President.—It would be possible, would it not, to send in periodical returns which could be checked by factory inspectors?

Mr. Sen.—Certainly.

Works Costs in Cottage Factories.

President.—Could you give us any costs for a cottage factory? We don't want to rush you into giving us the figures now but I would like your Association to go into it and give us a typical statement in the form given in our questionnaire.

Mr. Majumdar.—I will let you have that later.

President.—Could we regard your costs as typical of the cottage industries' cost?

Mr. Majumdar.—I should think so. Out of 150 factories which started in Dacca 15 years ago ours is the only one which has outlived.

Dr. Matthai.—What do you estimate your works cost per gross? In 1925-26 you gave your works cost per gross as Re. 1-8-0, for 1926-27 it would probably be lower still?

Mr. Majumdar.—No, it still stands at Re. 1-8-0.

Dr. Matthai.—Could you give us a more recent statement? Could you give us the same statement for 1926-27?

Mr. Majumdar.—Yes. I will send it to you.

Machinery.

Dr. Matthai.—You bought all your machinery locally?

Mr. Majumdar.—We bought old type machines which would produce 5 gross of veneers and splints.

Dr. Matthai.—I believe a good deal of machinery required for match manufacture is made locally by the Bhowani Engineering Company?

Mr. Gupta.—Yes, I am interested in that Company.

Dr. Matthai.—You make most of the machinery here?

Mr. Gupta.—At present we are doing repair work mostly for some big factories.

Dr. Matthai.—Are you mainly manufacturers of machinery?

Mr. Gupta.—We also manufacture splints and veneers.

Dr. Matthai.—If you take the Indian match factories in Bengal have most of them been buying their machinery from the Bhowani Engineering Company?

Mr. Gupta.—As far as the wood cutting machinery is concerned we have supplied to three or four factories here. We have also made peeling and dipping machines.

Dr. Matthai.—You are able to find a market for these against imported machinery?

Mr. Gupta.—Yes.

Dr. Matthai.—What is the sort of machinery which you are unable to put on the Indian market?

Mr. Gupta.—Frame filling and wrapping machines.

Dr. Matthai.—You have never made a frame filling machine.

Mr. Gupta.—We tried but it was not so good and the cost of making too was much more than the imported ones.

Dr. Matthai.—What about the pasting machine?

Mr. Gupta.—It requires very accurate work and accurate machinery to produce it which we have not yet.

Dr. Matthai.—That also you have not tried.

Mr. Gupta.—I tried, but so far have not succeeded.

Dr. Matthai.—Box Levelling machine.

Mr. Gupta.—I have not tried that.

Dr. Matthai.—What about splint levelling machine? Are you able to find a sale for that?

Mr. Gupta.—Yes.

Dr. Matthai.—You find it easier to sell your chopping and peeling machines than any other kind of machine.

Mr. Gupta.—Yes.

Dr. Matthai.—As a rule what is the difference between your price and the price of Japanese machinery?

Mr. Gupta.—I am selling generally at Japanese price less the duty and shipping charges.

Dr. Matthai.—Supposing the landed price of a Japanese machine was Rs. 300, your price would be Rs. 250.

Mr. Gupta.—Rs. 275.

Dr. Matthai.—And you are able to find small purchasers.

Mr. Gupta.—Yes. Calcutta manufacturers get machines from me whenever they want, whereas if they are to import, it takes much time to get them. Sometimes they arrive broken. The Calcutta manufacturers rather find it a gain to buy on the spot.

Dr. Matthai.—I suppose your machines are modelled on the Japanese machines.

Mr. Gupta.—Our wood cutting machinery is modelled on Roller's principle. As regards splint selecting, it is on the Japanese model.

Dr. Matthai.—The machine is largely made of cast iron.

Mr. Gupta.—Yes, and we also make appliances such as paraffin-dipping, frames, etc.

Dr. Matthai.—What is the annual output of your works?

Mr. Gupta.—It is according to demand.

Dr. Matthai.—Could you give us a rough average?

Mr. Gupta.—Last year we worked up to Rs. 50,000 and for 1927 I can't say anything now? Very recently I have got some big orders.

Dr. Matthai.—Is the business on the whole improving?

Mr. Gupta.—As regards repair work, it is.

Dr. Matthai.—You are the only people who are selling match machinery in India.

Mr. Gupta.—Yes, we are making the machinery and we do the repair work for all the Calcutta manufacturers except for the Western India Match Company.

Dr. Matthai.—That is really your mainstay.

Mr. Gupta.—For the current work that is the mainstay. In the meantime we manufacture and keep some machine ready.

Dr. Matthai.—Where did you get your skilled labour for your machinery factory?

Mr. Gupta.—I started the factory in 1920 and I trained my own labour.

Dr. Matthai.—Did you send anybody to Japan?

Mr. Gupta.—No.

Dr. Matthai.—You trained them all here.

Mr. Gupta.—Yes.

Dr. Matthai.—How many men have you now?

Mr. Gupta.—About 25.

Prices of imported and Indian matches.

President.—Could you tell me how the imported matches and the Indian made matches per dozen sell respectively? What is the price of a dozen packets of Indian matches?

Mr. Gupta.—About As. 2.

President.—And the imported?

Mr. Gupta.—About As. 3-6.

Concerns financed with foreign capital.

President.—In your letter of the 22nd June, you put forward two alternative proposals. Both these proposals contain one feature which is the same, viz., the question of the excise duty. You say: "In order that factories liable to pay the excise may not evade payment, it is suggested that the following interpretation of the term "foreign capital" be accepted:—Any capital not subscribed in India by Indians or people domiciled in India should be treated as foreign capital. An Indian factory to be exempted from payment of any excise will have to show, in addition, a directorate, at least three-fourths of which will be Indian (including foreigners genuinely domiciled in India)" and also that it is not financed by foreign capital. You suggest that it should be ruled that every factory (excepting cottage industries manufacturing without the aid of motive power) shall make an annual declaration, producing its books in support, to obtain a certificate from the appointed authority. The declaration will be in respect of two points. First of all that three-fourths of the directorate are Indian.

Mr. Sen.—It is for a factory established with mixed capital.

President.—After having made the declaration about the directorate, what about the capital?

Mr. Sen.—They will have to declare whether their capital is purely Indian or mixed and if mixed so much Indian and so much foreign. To the extent to which it will be foreign, the factory concerned will be liable to pay the excise duty.

President.—So that your scheme, I think, contemplates that each factory should put in a declaration to the Collector in which the directorate will be stated and a full list given of the shareholders, the Indian shareholders being distinguished from foreign shareholders. The Collector will then on the statement assess the excise at As. 8 per gross boxes of matches or a less amount in proportion to the amount of foreign capital.

Mr. Sen.—Yes.

President.—You use the words "domiciled in India".

Mr. Sen.—Yes.

President.—You know the question of domicile is a very difficult one.

Captain Petavel.—There is some difficulty about that.

President.—Supposing we take the Assam Match Company which is registered in India with a rupee capital. I think the capital is somewhere about Rs. 10 lakhs.

Mr. Gupta.—Yes.

President.—The Deputy Commissioner of the District in which the factory is situated will be faced with a task which may last for months. Suppose that gets a return of some thousand of shareholders.

Mr. Sen.—They will state the nationality against each shareholder.

President.—He will have to ascertain whether the statements made in the list are correct. He may have to call up a proportion of the shareholders I have had some experience in the Finance Department of this question of domicile in connection with the payment of overseas pay to certain officers and I can assure you that a decision on the point cannot be given without very careful examination of the evidence produced.

Captain Petavel.—The difficult cases would be very exceptional. In most cases it would be simple. The aim would be as far as possible to ascertain what interests were remitted outside India. It could not be carried out perfectly any more than, for instance, the collection of income-tax can be but it would help us and that is all we ask for.

President.—Yes, if you can accept the company's statement.

Captain Petavel.—Most of the shareholders can be known perfectly well. So there may not be such a difficulty in practice.

President.—Do you think that a conscientious Collector would do so? He will run some risk, would he not? After all the question whether As. 8 excise per gross is levied or As. 4 excise is levied is a serious matter. Do you think that a conscientious Collector should simply take the statement at its face value?

Captain Petavel.—He could check a certain number as again is done in connection with everything of the kind. He would not attempt to check them all.

President.—He might take 10 per cent. which is not excessive.

Captain Petavel.—As you say it would have to be checked, but the shareholders in most cases would not be very numerous?

President.—I don't know.

Mr. Sen.—We have got one mixed factory in Dubri. Most others of course are either Indian or foreign.

Dr. Matthai.—As soon as you introduce a provision of this kind, they will all be formed on the Assam basis.

Mr. Sen.—Yes, it may be so.

President.—Another difficulty is this. Supposing the Collector was considered to have satisfied the requirements of duty by checking 10 per cent.—

I do not know what your experience of administration is—it seems to me that the matter would not end here. Some interested party may challenge the statements of domicile and a further enquiry may then be necessary.

Captain Petavel.—Yes. You have had experience and I have none, but as I say it would we hope suffice if the plan were carried out as efficiently as was practicable. All that kind of thing we have to consider very carefully I suppose in the majority of cases there would not be an excessively large number of shareholders, would there? Generally the total number of shareholders would, I think, rather be small.

President.—We don't know how it is going to work. If this proposal was brought in, I don't imagine that the Western India Match Company would remain as a constitution unaltered for long. They would alter their constitution. They would at once appoint at least three-fourths of Indian directors or even possibly all Indian Directors. There would be no difficulty about that. They have got their shareholders' list. They would transform their capital into a rupee capital. It would not be so very difficult to evade this.

Captain Petavel.—The test is where the interest goes. So long as the interest goes to people abroad, or to foreigners as we define then it becomes foreign.

Dr. Matthai.—You cannot trace the interest on every holding.

President.—Have you read the report of the External Capital Committee? In this report all the difficulties that lie in the way have been pointed out.

Captain Petavel.—No. I should have thought that it would be easy enough generally to trace where the interest goes as shareholders are known. If so, it would be possible to do as much as we want.

President.—I am not quite clear as to the conditions which the Association's proposal is designed to meet. There appear to be two ideas underlying it. First of all there is the feeling that the interest on Capital employed in an industry which actually manufactures in India is going abroad. Then there is also a separate idea, *viz.*, that a firm whether foreign or not backed by a large amount of money is coming into the industry and forming a monopoly. That is what you really fear.

Captain Petavel.—It is the foreign capital forming a monopoly, that we fear. As Mr. Sen urged it to me protection is food for infant industries that may grow up. We must not allow adult ones from abroad to come and eat it up leaving the infants to starve. This would indeed be a misuse of protection.

President.—Then what you seek is some sort of anti-trust legislation.

Captain Petavel.—It is really that in effect. Afterwards it might take another shape, but at the present moment as you say it would be anti-trust.

President.—From the point of view of the cottage industry the position will not be different so far as I can see if the Swedish Match Company were entirely an Indian concern with several crores of capital.

Captain Petavel.—It would probably not but what we want to do in a word is to prevent foreign capitalists with the advantages they have from crushing the Indian industry that is why I think it is correct enough to define it as an anti-trust legislation at present. Now the question after all is how in practice is the plan to be carried out. In most cases there would be rather few shareholders. The cases where there are a very large number I should say, would be exceptional, so it might not be difficult to ascertain.

President.—It is a question which we may go into later. For instance we may ascertain how many shareholders there are in the Assam Match Company when the Swedish people come up for examination.

Dr. Matthai.—It is very little use practically finding out the actual number of shareholders at a particular time, because shares may change hands.

Captain Petavel.—Quite so, but everything charges but we want a measure to help us now and give us time.

Dr. Matthai.—The list which may hold good to-day may not hold to-morrow.

Captain Petavel.—Quite, but we need not take it for granted that the changes would make changes impossible.

Dr. Matthai.—I am pointing out the difficulties.

Captain Petavel.—As the President says it may amount for a time to anti-trust legislation, but it would be applied in a moderate way.

Unfair Competition.—Assistance required by the Cottage Match Industry.

Dr. Matthai.—Have you had actual experience of unfair competition in Bengal at the hands of the Swedish Match Company?

Captain Petavel.—What precisely do you call by unfair competition?

Dr. Matthai.—Have they been selling at less than economical prices?

Mr. Gupta.—We can't say that unless we know their cost of production.

Dr. Matthai.—What is your impression?

Mr. Gupta.—My impression is that sometimes they sell below cost. I find sometimes that they sell certain brands at certain rates. Take one brand-Panpatty. They are selling it in the Calcutta market for Re. 1-8-0. In another market, for instance, *e.g.*, Cuttack, they sell the same brand at Re. 1-8-0 or Re. 1-9-0. As soon as we send our matches there, and people begin to buy them, they at once reduce their rate below the Re. 1-8-0 at which they sell in Calcutta. If they sell in Calcutta at Re. 1-8-0, they should sell at Cuttack at the Calcutta price *plus* the freight and other cost, but sometimes they sell at much less, Re. 1-4-0 or Re. 1-5-0 in the Cuttack market apparently to oust everybody else. As soon as there are no more matches in the market made by other factories, they again raise their price.

President.—Then you send your matches again as soon as they raise their price.

Mr. Gupta.—I have been to Madras just before the Pujas. I find that in every station where I sent my matches, they at once reduced their price.

Dr. Matthai.—Could you give me a statement showing specific evidence of the sort of sales.

Mr. Gupta.—I will try and collect the details from customers.

Dr. Matthai.—We have had general statements made before us, which are really of no use. Could you give us a note on the sort of unfair competition that you have actually experienced?

Mr. Gupta.—In my opinion it is unfair on their part to sell matches in the mofussil market at a rate less than their Calcutta rate when they have at least to bear the freight. Others are not doing the same. The other manufacturers, *e.g.*, Messrs. Adamjee Hajee Dawood and Company, the Esavi India Match Manufacturing Company and N. M. Metha are not competing in that way.

President.—Messrs. Adamjee Hajee Dawood and Company, sell their matches, I believe, in Madras much cheaper than they sell in Burma.

Mr. Gupta.—In Burma, they are getting a rather better price. There no harm in that.

President.—Messrs. Adamjee Hajee Dawood and Company have also to pay freight and other expenses.

Mr. Gupta.—In Calcutta if they were selling at Re. 1-8-0 per gross and afterwards if they were to reduce their price in the mufassal market, they could also reduce it in Calcutta.

President.—So could Adamjee's?

Mr. Gupta.—They did not think it necessary. In spite of the keen competition in the Calcutta market, the Western India Match Company never reduced their price.

President.—Would not they, if they found it necessary.

Mr. Gupta.—I do not know.

President.—We hope to publish the evidence of the Swedish Match Company next month.

Mr. Gupta.—As soon as their cost of production are published, we can show that where they are selling at Re. 1-8-0, there is very little margin.

Dr. Matthai.—Has there been any attempt on their part suddenly to release their stocks at a low price? Somebody in Bombay complained that they did.

Mr. Gupta.—Yes, they suddenly came down by two annas.

Dr. Matthai.—They suddenly emptied their stocks on the market.

Mr. Sen.—This kind of competition ousts Indians with less capital from the market.

President.—What is the lowest price at which they sell?

Mr. Gupta.—Re. 1-8-0 per gross is their lowest price.

Dr. Matthai.—Where do they sell at that price?

Mr. Gupta.—Up to Bezwada. There is very little margin in that?

President.—You are also selling at Re. 1-8-0 per gross.

Mr. Gupta.—We are compelled to do it.

President.—They say the same thing to us that if they don't sell at Re. 1-8-0, they will not be able to sell at all.

Dr. Matthai.—Their position is that the Indian factories compete against themselves and pull down prices to such an extent that it would be impossible for the Swedish Match Company to get a higher price.

Mr. Sen.—It was they that brought down the price.

Dr. Matthai.—They told us that the initiative was taken by Indian companies. As far as we are concerned we cannot go by any general statements that you may make. We have to find specific evidence. All that I am asking you is whether you could give something specific. There have been various allegations made to us since the enquiry began which are of no use to us. I want to know whether any specific attempt has been made by them to under-cut?

Mr. Sen.—What do you mean by 'under-cut'?

Dr. Matthai.—Re. 1-8-0 is more or less the price at which Indian matches are sold. If you say that the price of Swedish matches has been reduced from Re. 1-10-0 to Re. 1-8-0, it does not amount to anything. If you could give evidence of some big sudden reduction which has been made in order to injure Indian manufactures, it would be useful.

Mr. Sen.—Have they not already done that in the way, Mr. Gupta illustrated by the Cuttack example.

Mr. Gupta.—I got information through local agents, but it is not possible to disclose names.

President.—Have you had any exchange of views with the Western India Match Company on this subject?

Mr. Gupta.—No.

President.—Both parties, as far as we can see, say "we have had to reduce our price because the other party has reduced his." I wondered whether any negotiations had taken place with a view to stabilising prices.

Mr. Gupta.—The Esavi India Match Manufacturing Company are selling their matches at a higher price.

President.—How do they obtain a higher price?

Mr. Gupta.—Their brands are well known. They have been in the line for the last 50 years and they are making better matches.

President.—Do they get a much better price than the Western India Match Company?

Mr. Gupta.—Yes.

President.—They probably turn out better matches than the Western India Match Company.

Mr. Gupta.—May be, but the chief point is that their brands are very well known.

President.—If you could give us any definite instances of price cutting, etc., we might find them useful.

Dr. Matthai.—It is a very big thing to ask the legislature to undertake anti-trust legislation, unless there was a real danger that the Swedish Match factories intended using their position deliberately to oust Indian factories. Unless you produce some evidence, the legislature may not be willing to move in this direction. So, the case would have to be made out fairly clearly and strongly.

Mr. Gupta.—We will be able to do that when their costs of production are published.

Dr. Matthai.—If you find any evidence to support your case, you can write to us.

Captain Petavel.—Whatever their intentions may be there is evidence that they are cutting prices so much as to make them unremunerative, with the result that a number of our factories have closed down.

Dr. Matthai.—Unremunerative for the cottage factories?

Captain Petavel.—Yes.

Mr. Mazumdar.—A large number of factories have been closed down in Eastern Bengal.

Dr. Matthai.—That may not be the result of any action for cutting you out. When you have factories working on a very large scale, they are able to make economies which you as a small factory are not able to make; so their costs are lower. It is not that they want to cut you out deliberately.

Captain Petavel.—That is the very reason why we are asking for protection. These people come here with much greater experience; they come here with that command of capital which Indian firms don't command and they come also with a powerful combination—that is also part of their experience—and owing to these things they are able to produce and sell at a price that is not remunerative to the smaller industries.

Dr. Matthai.—There might be a case for declaring the industry a protected industry; but what is the case for an anti-trust legislation?

Captain Petavel.—Our case is that the industry in India it is an infant industry and the infant industry has not as yet the experience nor the command of capital to enable it to compete with foreign ones that crush them as a trust might do. That is what we want to prevent.

Dr. Matthai.—That may be because they are producing more economically—not necessarily because they are acting like a trust?

Captain Petavel.—We say India for Indians. Just as they are Indianising the railways, and different other things, we say, let Indians have at least a chance of manufacturing matches in the country and as to have mentioned if there is to be protection it must be for infant industries not for adult ones to come and get far on.

Dr. Matthai.—There are certain very large factories in the country—take for instance Messrs. Adamjee Hajee Dawood and Company who produce 6,000 to 7,000 gross a day. Their influence on small factories would precisely be in the same direction.

Mr. Sen.—No. In 1923-24 there were Indian factories producing about 2,000 gross a day but still the others survived.

Dr. Matthai.—It is a very different matter when the production is 8,000 or 10,000 gross a day. In most industries when you carry on production on a very large scale, you do get economies which are difficult in the case of smaller factories.

Captain Petavel.—It is true that all large industries are able to crush the weak or small industry but this giant who has come into the field is accelerating the process. Whilst admitting that people like Adamjee's whom you mentioned will be gradually killing these cottage industries, we say that if we allow the Swedes to come in, they will kill them at an unmerciful speed.

Dr. Matthai.—It is not that the Board as such has formed any kind of opinions. I am simply trying to elucidate the position. If we find as a result of listening to the evidence of experts and studying the literature on the subject that about 1,000 gross a day is the scale on which a match factory can run economically—it may be true or not but for the sake of argument let us take it that that is so—would we be justified at public expense in keeping alive factories which do not produce that amount?

Captain Petavel.—I should say decidedly yes. It is a question of getting the country developed industrially. From a purely economic point of view, we may not be justified but, then, from a purely economic point of view, any kind of protection can be condemned.

Dr. Matthai.—I am not so sure.

Captain Petavel.—I should certainly say that if you are looking at it purely from the point of view of theory, all protection might be condemned, but as a matter of fact, here is a country with a crying need of industrial development. The problems of sub-divided holdings are all connected with it, absolutely and directly and then there is the question of unemployment among the middle class, which is also connected with them. For every reason the country wants to develop industrially. It cannot get on to its legs economically and till it is actually able to stand on its own legs, it will be more or less like a helpless baby. It will not be as efficient as other industrially advanced countries. But what we ask for is only protection for a limited time to allow this industrial development and permit practical industrial education to be imparted to people; so that they may ultimately be able to stand on their legs.

Dr. Matthai.—I take it that you are looking at the question of protection of the match industry from the point of view of employment for certain classes of people.

Captain Petavel.—Not quite that. We are looking at it from the broadest and most general sociological point of view; and from the point of view of the industrial education of the country.

Dr. Matthai.—We are here working under certain limitations placed upon us by the Fiscal Commission. We are simply carrying out their policy. One of the conditions laid down by them is that unless the industry is able to stand by itself after a certain time, it does not justify the granting of protection. What I am asking you is supposing at the end of 15 years we take off this duty will the cottage industry have the slightest chance of standing against big factories?

Captain Petavel.—Frankly I should say no. But the cottage industry would have served its purpose by then. It would have directed people towards industrial work. The cottage industry would have served as a stopgap. Then I should say—I don't know how many people would agree with me ultimately the tendency will be in the direction of co-ordination of industry, and when we get to this point of co-ordination there will be a strong tendency for moderate size factory to spring up in different places working in co-ordination. When you get to that point, the moderate size factory will have immense advantages in supplying its own locality. It will be using wood grown in the locality and there will be better *bundabust* for the necessary wood to be grown locally. Labour will be supplied by the local people who will be partly cultivators and partly industrialists. We look ahead and also if we look at the present need of solving these various problems, we can see the arguments for not allowing an undue amount of big capitalists to compete to crush the small industry.

Dr. Matthai.—May I know whether you foresee any future for the cottage match factories if they are kept alive for a certain limited period?

Captain Petavel.—I see a future for them if we arrive at the stage of what I have described as the co-ordination of industries. They will then have a chance in their own separate localities.

Dr. Matthai.—May I put it this way. Assuming your position is generally right, that if you take a sufficiently long view there is scope for the organi-

sation of the match industry on a cottage basis, the correct solution rather lies in co-operative organization. Your tariff will apply both to cottage factories and large factories alike. There cannot be any differentiation as far as tariffs are concerned. Behind the tariff wall you have an inevitable tendency for factories to assume bigger and bigger proportions.

Captain Petavel.—What I mean is this. If what I suggest can be done—if you will give the cottage industries breathing time—it may have its immediate utility. Speaking of the present it will give employment to a certain number of people, and serve as an industrial school and educate people in industry, and moreover if one takes a long view one can foresee in the cottage industry the nucleus of something that will be economically sound.

Dr. Matthai.—There is a good deal to be said for organizing small producers, but my difficulty is whether tariffs are a proper method of doing it.

Captain Petavel.—That, as a matter of fact whilst fully agreeing with you about the only thing that, as far as we can see, can serve as a stop gap that might save us in the present situation. We are faced once more with the fact that these small factories are shutting up. That will not do.

Dr. Matthai.—You are familiar with the Industrial Commission's report. I suggest that for the encouragement of cottage factories the right kind of assistance is the assistance suggested by the Industrial Commission rather than that suggested by the Fiscal Commission.

Captain Petavel.—We are not thinking only of the cottage industries but also of the relatively small Indian factories. They are also being pushed into a tight corner by this competition. I fully admit that the relief you can give will be more or less temporary. Even supposing we could smash up WIMCO, big Indian factories would no doubt spring up which would compete very severely with the small ones, but taking the situation as it is as pressing on us, looking at our shoe and where it actually pinches—I am keen on other methods besides protection as I emphasise very strongly in all my books—but looking at things just as we find them confronting us now, we all came to the unanimous conclusion—and we had a meeting of match manufacturers from all over India and we discussed it very fully and we were all agreed, there was only difference of detail—that the only thing that could be done at present was just to enable them to go on and do their necessary work and give them a lease of life. As I say we were unanimous and that was passed by the last Industrial Congress where we put forward a resolution which too was unanimously passed.

Dr. Matthai.—Captain Petavel, you have undertaken varied studies on these lines but I personally can't think of a case where tariff assistance has been of help to a cottage industry.

Captain Petavel.—It can temporarily, don't you think?

Dr. Matthai.—I find it difficult to accept the proposition. What the Cottage industry really requires is some kind of stimulus in the way of organization. It is really co-operative organization that is going to help you and co-operative organization means just self help.

Captain Petavel.—That is right but we can't get that all at once, and once more we are not thinking only of cottage industries.

Dr. Matthai.—May I venture to point out, that the great weakness in the case of the Match Manufacturers' Association is that the existence of that Association has provided no kind of co-operative organization for the Cottage factories.

Captain Petavel.—We have thought much of that, but you know co-operation does not grow in a day. It is not one of those beautiful things we see growing up when we dream of it! It is astonishing the number of failures. There is perversity in human nature which makes it exceedingly difficult to organize the most obvious and most beneficial kind of co-operation. We have thought it out well and we have gone into it very thoroughly and we have met, as I said, from all parts of India, and we see what the industry wants just at present is the respite a tariff would give it. Then most certainly

we shall turn our attention to other ways, if you only put a dam against the flood then we hope to get on without it ultimately.

President.—When you speak of tariff do you mean actually duty or excise?

Captain Petavel.—It is excise also we are asking for.

President.—Do you think this suggested exemption from a 4 annas excise duty would be some guarantee against any trust or monopoly being able to raise prices?

Captain Petavel.—Our industry has advantages of its own. It can often get directly to its customers and with that advantage it might struggle on.

President.—Do you think that the existence of a certain number of cottage factories in India protected by the suggested exemption of 4 annas excise would be in itself some guarantee that as a result of a monopoly whether foreign or Indian, prices were not raised?

Captain Petavel.—I should say from every point of view it is worth trying once more. We have been passing through a very acute situation, with the problem of unemployment and all that sort of thing. When the pressure of population becomes very heavy on the land, there is nothing for it but to go in for industrial development, and as I have strongly insisted it touches the question of sub-division of holdings. Industrial development is just the way of getting into this problem. If we have this thing we might go into the root of all economic troubles in the country. Unemployment, sub-division of holdings, rural reconstruction all depend upon suitable industrial development going side by side with agriculture. As I say, we have really gone into every side and aspect of the matter very thoroughly and have taken a lot of trouble and have spent a good deal of money to get people come from all parts of India, and we were unanimous on the point that at the present moment as a stop gap if you like what is wanted is that Government should give us this respite.

President.—When the evidence of the Swedish Match Company is published—we hope it would be sometime next month—it will be obtainable on sale, will you let us have a note on this point of unfair competition?

Mr. Gupta.—Yes.

Dr. Matthai.—As far as possible giving specific instances.

Mr. Gupta.—Yes.

Captain Petavel.—There is the question of delay. Delay means death to our people. Then again there is one point I would like to place before you—I do not know to what extent this concerns the Board—we have got vexatious factory rules which would not allow us to employ boys under 12. It is a curious thing that if you take boys at 8 you can train them easily. In our school we train boys of 8, if we take then of 12 it is often too late. We are awfully handicapped if we do not take boys under 12. We would be prepared to make arrangements to give them a certain amount of schooling, so it would be a combined industrial school and workshop.

Dr. Matthai.—That is a problem that arises in all industries.

Captain Petavel.—Particularly in our cottage industries.

Dr. Matthai.—In the small match factories you employ a good deal of boy labour, do you not?

Captain Petavel.—Yes.

Mr. Sen.—I have received a letter that I produce complaining that it is not allowed in Madras.

President.—I am afraid that is outside the scope of our enquiry.

Mr. Sen.—We understand, however, that but some recommendations by the Board would help us. There is no dangerous operation required of boys. We can have a separate shed for them where they can do the pasting and things of that sort.

Burma Indian Chamber of Commerce, Rangoon.

A.—WRITTEN.

(1) Letter, dated the 30th November 1926.

With reference to the resolution of the Government of India, Department of Commerce, No. 235-T. (14), dated the 2nd October 1926, entrusting an enquiry into the prospects of the match industry in India to the Tariff Board, I am directed by my Committee to send hereby their views in the matter.

2. The resolution states that "the first point for enquiry is whether the three conditions laid down in paragraph 97 of the Report of the Indian Fiscal Commission are satisfied in the case of the match industry in India, and whether the industry should be protected." My Committee therefore propose to examine, at the outset, these three conditions seriatim:—

The first condition laid down by the Indian Fiscal Commission is that "the industry must be one possessing natural advantages, such as an abundant supply of raw material, cheap power, a sufficient supply of labour, or a large home market."

The chief raw material in the manufacture of matches is wood, which is available in abundance in Burma as well as in India. My Committee are aware that some of the factories have to rely upon imported wood but it is generally believed that this is due more to the lack of proper development of the forest resources in this country than to the absence of suitable woods in sufficient quantities. So far as my Committee are aware the industry has not experienced any difficulties with regard to the supply of cheap power or sufficient supply of labour although in the present stage of the industry, it has per force to rely to some extent upon imported skilled technical labour. But my Committee have no doubt that in course of time, it will be possible to displace imported technical labour by Indian labour. That there is a large home market for matches can hardly be disputed as they are an article of daily necessity even to the poorest of the population. This can be easily seen from the following figures of imports of matches from foreign countries:—

	Gross of boxes.
1920-21	12,398,733
1921-22	13,680,801
1922-23	11,285,740
1923-24	11,243,745
1924-25	7,264,785
1925-26	7,928,522

The marked decrease in 1924-25 and 1925-26 is accounted for by the steady growth of the match industry in India.

The second condition laid down by the Indian Fiscal Commission is that "the industry must be one which without the help of protection either is not likely to develop at all or is not likely to develop so rapidly as is desirable in the interests of the country." The Tariff Board are no doubt aware that prior to the year 1922, when the present rate of import duty, viz., Re. 1-8-0 per gross, was levied, efforts made to start the industry in India were not successful and she was entirely dependent on foreign matches. As soon as, however, the rate of duty was raised to the present figure numerous match factories were established in India because the high rate of duty, though levied for revenue purposes, served as a protective duty. The fact that the match industry in India showed a good progress only after the import duty on matches was raised to the present figure is sufficient to show that the match industry is one which is not likely to develop without the help of protection.

The third condition laid down by the Indian Fiscal Commission is that "the industry must be one which will eventually be able to face world competition without protection." My Committee are of opinion that during the brief period of its existence the industry has shown steady progress in spite of the many difficulties, which a new industry has necessarily to face. There can be no better proof of the progress of the industry than the comparatively substantial decline in the imports of matches in 1924-25 and 1925-26 and the progressive decline in the customs revenue from matches since 1923-24, which has necessitated the present enquiry. The Government of India themselves admit that "as the Indian factories overcome technical difficulties and attain their full production, the decrease in customs revenue is likely to become more serious." My Committee therefore feel sure that the match industry will eventually be able to stand on its own legs and face world competition without protection.

3. My Committee hope that what has been stated above will convince the Tariff Board that the match industry fulfills all the conditions laid down by the Indian Fiscal Commission and is therefore fully entitled to be protected. With this end in view, my Committee strongly urge that the import duty on matches, splints and veneers should be declared as a protective duty and the existing rates of duty on these articles should be maintained. They beg to point out that the industry has not had sufficient time to get over technical difficulties and any reduction at this stage in the present rate of duty on matches will therefore seriously jeopardise the prospects of this important and promising industry.

4. My Committee note that the present enquiry has originated on account of the progressive decline in the customs revenue derived from matches since the year 1923-24. They feel that the Government of India should not attach far more importance to considerations of their revenue than to the development of an industry which not only supplies an article of daily and universal consumption but which has also already given indications of a useful and steady growth. Apart from this, my Committee beg to point out that with the development of the match industry in India, the import of the various materials used for the manufacture of matches, such as chemicals, wood, timber, zinc sheets, starch, labels, printing materials, glue, machinery, etc., must have necessarily increased. They therefore beg to submit that the decline in customs revenue derived from matches, splints, and veneers should have been substantially recouped from the enhanced revenue on the import of articles enumerated above. My Committee also beg to point out that the match factories in India must be paying large amounts as income tax. These factors should therefore be taken into account in deciding how far Government revenues have been actually affected by the present rate of duty on matches, etc., and my Committee feel sure that if this is done, the decline in revenue should be comparatively small.

5. The resolution of the Government of India states in paragraph 2 that "if the Tariff Board decides that consideration must be paid to the industry brought into existence by the present rate of duty and that the duty should be maintained at the present figure, or approximately at the present figure, it will further report whether the loss of customs revenue can be made up in whole or in part by any other appropriate form of taxation of the industry." In this connection my Committee beg to state that as pointed out above, the actual loss in revenue should be comparatively small. My Committee believe, however, that it is not in the best interests of this country to allow foreign syndicates, with vast resources and a long technical and business experience in the line, to start match factories in India behind the wall of protection, as it would be very difficult for Indian industrialists to compete with them. The object of any protective duties, my Committee submit, should be to encourage the development of industries by Indians themselves with Indian capital. They beg therefore to suggest that a discriminating excise must be levied on the products of these factories, which are wholly or mainly financed by foreign capital. Under no circumstances, however, should any burden whatsoever be imposed on factories, run purely by Indian capital and Indian enterprise.

6. In conclusion, my Committee beg to submit that as a result of the present high duty, although levied purely for revenue purposes, substantial vested interests have been created throughout the country. During the last four years, numerous match factories have sprung up, involving a large amount of capital, which are not only employing a large number of workmen in the factories but which have also created work for labourers in forests, cartmen, coolies, etc. The industry on the whole has, during the brief period, shown good progress and promises immense possibilities. As several match factories are using indigenous woods, the forest resources of the country have been gradually developing, and with this development the revenue of the various provinces from this source is bound to increase. When the match industry is fully developed, it is also possible that other industries connected with chemicals, papers, etc., which are extensively used in the manufacture of matches, will also develop. The Tariff Board will thus no doubt realise that on their findings in the present instance depends the future of many important industries in India. My Committee therefore beg to point out that any reduction in the import duty on matches, which would be tantamount to the withdrawal of protection from the Indian match industry, will be extremely detrimental not only to the match industry, but also to the general industrial interests of the country, and beg to suggest that besides recommending the continuance of the present rates of duty on matches, splints and veneers, the Tariff Board should also suggest special facilities to be accorded to this industry which is still in the stage of transition, e.g., facilities for making suitable indigenous woods in sufficient quantities available to Indian match factories, transport facilities, etc. They feel sure that the Tariff Board will not allow the interests of an essential Indian industry being sacrificed to the revenue exigencies of the State.

7. My Committee will be glad to depute a representative or representatives to tender oral evidence before the Tariff Board.

8. To sum up :--

- (1) The match industry fulfills all the conditions laid down in paragraph 97 of the Indian Fiscal Commission and is thus entitled to be protected.
- (2) The import duty on matches, splints and veneers should be declared a protective duty and the present rates of duty should be maintained.
- (3) If the increase in customs revenues from the import of articles used for the manufacture of matches and the amount paid by Indian match factories as income-tax are considered, the decline in customs revenues should be comparatively small.
- (4) A discriminating excise duty on the product of factories, financed wholly or mainly by foreign capital must be levied; but under no circumstances should any burden be imposed on factories run purely by Indian capital and Indian enterprise.
- (5) Besides recommending the continuance of the present rates of duty on matches, splints and veneers, the Tariff Board should suggest special facilities to be accorded to this essential industry, which is still in a stage of transition.

(2) *Supplementary statements handed on the 31st March 1927.*

(i) *Note regarding the Swedish Trust.*

We have sufficient materials, we believe, to prove that the Swedish Trust does exist, that it is operating in India and that it is operating in a way prejudicial to the interest of the Indian match industry.

The origin of the Trust goes back to the establishment of a match factory in the Swedish City of Jonkoping (1848) which was soon followed by numerous

others. After fierce struggles between the competing firms, an agreement was arrived at by them in 1917 which provided for the amalgamation of all the Swedish match producing concerns under the name of the Svenska Tandsticks A. P. with headquarters at Stockholm. The completion of this process of concentration enabled the Swedish match-producing industry to devise vigorous measures by which to extend its influence in the world's markets. By cleverly adapting its policy to the conditions created in the various countries through the war, the Trust secured to itself a considerable influence upon production abroad. In some countries, *e.g.*, Peru, Turkey, Greece and Poland, the Trust has obtained an actual monopoly. In Japan, their activities have practically jeopardised the national industry. In the beginning, the Trust joined as Managing Partners with some factories and after making heavy losses for some years, they succeeded in forcing the proprietors to sell off their factories to the Trust. In some factories, they have got half shares and the Japanese partners are now tired and are likely to sell off their shares in the concerns to the Trust. Their activities in Germany are described in an article which recently appeared in the "New Empire." Copies of which we hand over herewith.

In India, when the import duty on matches was raised to the present figure, the Trust found that manufacturing matches in their own country for export to India left them very little profit, and consequently they started factories in India. They increased their share capital and issued 272,500 shares of £7-5-0 each, which were over-subscribed in the London market. The Swedish Company thus created a British interest in the industry expecting perhaps to have things smooth for them in India. The activities of the Trust in India are described in the following extract from the speech of Mr. Ivan Krouger, Managing Director of the Swedish Match Company, at the meeting of Shareholders held in London on 15th May 1925:—

"It is easy to understand, however, that if the Swedish match industry is to retain its leading position, it cannot rely only on the Swedish factories, and for this reason the Swedish Match Company decided a few years ago to go in for a programme of taking interest in match factories abroad on a very large scale. We have now in operation two newly-built factories in India, one in Bombay and one in Calcutta, and we are building two new ones, one in Karachi and one in Madras, and we have acquired two established match factories in Colombo and Rangoon. It is not our intention to try to monopolise the Indian match trade, and we have decided to seek the co-operation of prominent Indians in our Indian undertakings."

The Trust is thus selling some shares in India to establish the fact that theirs is mixed capital and that their interests are bound up with those of the Indians in the industry. We have the concrete case of the Assam Match Company, which has got 3 Indian Directors out of 7. Their activities in India and the means employed by them are described in an article which appeared in the "Industrial Trade Review for Asia" in October 1925, which is published in Berlin, copies of which are handed over herewith.

Extract from an article in the "New Empire," dated 8th March 1927.

The Trust began to exercise a certain influence on the position of the German match producing industry as early as 1919-20 when it sold 40,000 cases of Swedish matches to German buyers, and when it placed part of the sale price at the disposal of the Allgebeine Zundhelzexport-Zentrale G. m. b. H., of Hamburg, in the shape of a loan granted to the latter concern. It next secured three-quarter majorities in the firms of Messrs. Stahl and Noelke A. G. and Deutsche Zundhol fabriken A. G. (the so-called "Kasseler Konzern"), and shortly afterwards it acquired an important percentage of the shares of the Union A. G., of Augsburg. At the same time the small factories dependent on these three concerns were also brought under its influence. In this way the Trust acquired control, within a very short space of time, of 70 per cent. of the German production.

Advance of the Trust.

The correct policy of the remaining concerns that had saved their independence would have been to combine their forces against the further advance of the Trust. Instead, however, of doing this, they continued to underbid each other, and finally approached the Government with the request to reintroduce the system of rationing production. But events had moved too fast, and the Government's economic council (Reichswirtschaftsrat) after studying the problem in great detail, came to the conclusion that the proposed measures of difference were ineffective, and that the creation of a state monopoly would also be liable to serious objections. Thus the only thing to do was to let matters take their natural course in the direction of a private monopoly and to ensure that proper provision was made for the protection of the general public and its interests. The intervention of the Government led to the conclusion of a syndicate agreement to which all the producers were parties. All of them with the exception of the Grosseinkaufs-Genossenschaft deutscher Konsumvereine, undertook to place their output at the disposal of a selling organisation in the shape of a limited company or corporation which is to fix prices, to arrange for the proper distribution of the output among home consumers, and to take in hand the exporting business. The capital of the Company is one million reichmarks, one-half of which sum represents the share of the Trust, whilst the other half has been taken over by the German producers and the German Government. The participation of the Trust in the capital, therefore, is less than its share in the production it controls, which amounts, as has been said to 70 per cent. The agreement is to run for twenty-five years, and contains a clause entitling the Government to a certain influence on the fixing of prices, so that the interests of the consumers may be properly protected. Another important stipulation is that the Government is to issue, prior to March 1st, 1927, an enactment making it illegal to manufacture matches without the consent of the Government—a measure intended to make a renewed over production impossible.

Extract from the "Indian Trade Journal," dated 4th February 1926, page 175.

MATCH INDUSTRY IN BIHAR AND ORISSA.

The following is an extract from the Annual Report of the Director of Industries, Bihar and Orissa, for the year 1924-25:—

The scheme for a demonstration match factory mentioned in last year's report was placed before the Board of Industries in August and eventually sanctioned by Government. The project is for the erection of a match factory in the old saw mill belonging to the opium factory at Gulzarbagh on the outskirts of Patna City. The saw mill used to obtain its supplies of wood for opium chests from rafts floated down the Gundak and Gogra rivers from North Bihar to the mill compound which stands on the banks of the river Ganges. It is proposed to obtain supplies of wood for match-making from the forests of Bettiah and Ramnagar estates by the same method. The project was based on the supply of wood at the factory at 15 annas a c.ft. but the Bettiah estate has undertaken to deliver 10,000 c.ft. at the factory for 10 annas a c.ft. so that after due allowance for wastage, etc., it looks as though production will be cheaper than was anticipated.

The woods which it is proposed to use are *Celtis Australis*, *Trewia Nudiflora* and *Alstonia Scholaris*, which are reported by Mr. Ghose to be available in large quantities in these forests. The woods were not only tried in Calcutta, but have been subsequently tested in Bombay by the Match Manufacturing Supply Company, which is supplying the machinery to the factory, with very satisfactory results. *Trewia Nudiflora* has long been known as one of the best match woods in India, and the other two appear to have all the qualities of a good match wood. There are said to be other suitable woods available should the supplies of these woods prove insufficient. The estimated minimum output of the factory is 30 thousand gross per annum, *viz.*, 100 gross a day for 300 days,

but it is hoped with the machinery provided that a larger output will eventually be achieved. The objects of the factory are as follows:—

- (1) to see whether good matches can be made in India from Indian woods at a profit in a well-equipped factory;
- (2) to enable persons to see the best match machinery in action;
- (3) to enable Government to give advice with confidence to persons who required it; and
- (4) to train any person, who desires to learn how to make matches in an up-to-date manner.

The location of the factory at Patna, besides making supervision easier, will facilitate inspection by would be manufacturers. The project was accepted by the Legislative Council and Rs. 85,000 has been provided in my Budget for the present year. Of this Rs. 15,000 is assigned for working capital, and the balance for machinery and plant, erection charges and preliminaries and contingencies. It appears likely there will be a substantial saving in the estimate.

Extract from the "Indian Trade Journal," dated 17th February 1927, page 295.

MATCH INDUSTRY IN THE MADRAS PRESIDENCY.

The following is an extract from the Report of the Department of Industries, Madras, for the year ended 31st March 1926:—

There are no further developments to record with reference to the match industry in the Madras Presidency. Two new companies were registered during the year with the object of manufacturing matches, viz., Sri Briganayaki Match Factory, Ltd., Cuddalore, with a capital of Rs. 1,50,000 and the Sri Krishna Match Company, Ltd., Palghat, with a capital of Rs. 6,000 and the progress of these concerns will be watched with interest. The proprietor of a match factory in Bellary has applied for a loan of Rs. 20,000 under the provisions of the State aid to Industries Act for the purpose of installing additional plant and providing the further capital required by the concern and this is now under consideration. The vital necessity of selecting a suitable site for the establishment of a match factory and of ascertaining beforehand whether suitable match woods can be delivered at the factory site at a price which will admit of manufacture at a profit cannot be too often and too strongly emphasized as instances have come to notice where essential preliminary enquiries as to the availability of a suitable wood supply have not been made. The difficulty of extracting timber at a price low enough to enable match manufacture to be conducted at a profit is not always appreciated by enquirers who appear to think that it should be an easy matter for the Forest Department to supply them with timber in the required quantity at a sufficiently low price whereas, so far as the information at the disposal of the department extends, the centres where suitable timber is available are very few. The best location for a match factory in the opinion of the Forest Department, is on the West Coast although even here difficulty would be experienced in obtaining supplies at cheap rates which is essential for success as all suitable match woods are also in demand for coffee and tea boxes and prices are therefore comparatively high. As previously pointed out, any scheme for exploiting woods for match manufacture should preferably be linked with a general scheme for extracting all marketable timbers and utilizing waste ends for splints and veneers by working them up into match woods. The only wood which will be cheap is waste from saw mills but the only saw mill where the Forest Department have any quantity of soft wood is Olavakot; and there are now two match factories near there. In any location, the Forest Department would have difficulty at present in supplying a sufficient quantity of suitable wood and under present circumstances therefore it seems probable that a large factory would have to use imported timber for splints and veneers.

Extract from the "Indian Trade Journal," dated 11th March 1926, page 425.

MATCH INDUSTRY IN THE UNITED PROVINCES, 1924-25.

The following is an extract from the Annual Administration Report of the Department of Industries, United Provinces, for the year 1924-25:—

General Position.

The possibilities of manufacturing matches continued to engage the attention of capitalists in these provinces. A power-driven factory was started at Muttra and a small factory for the manufacture of matches for splints and veneers imported from Calcutta was started at Agra. A third one was started at Jwalapur near Hardwar and several schemes were in the air. Of the factories which had been started in previous years, the only ones which were going concerns were the factories at Mirzapur and Lucknow. The factory at Nagina did not work.

Supply of damp-proof formula.

One of the main hindrances which impeded the progress was the difficulty of obtaining a formula for making damp-proof matches. The department therefore arranged to obtain such a formula from Mr. N. B. Mukerji, B.Sc., Consulting Match Expert of Cuttack, on payment of a remuneration of Rs. 1,000 plus other expenses sanctioned by the Board of Industries. This formula was demonstrated and examined at the Technological Institute, Cawnpore, and the matches made from the materials supplied by Mr. Mukerji were found to be as good as some Swadeshi matches on the market. The formula is available, without any payment, to *bonâ fide* manufacturers.

Grant of concession rates for wood purchased from Government Forests.

The decision of the Government with regard to this form of assistance was that they were unable to grant any general concession prior to receiving applications, but that they were prepared to consider on their merits individual applications for aid. Individual cases are being examined by the Forest Department.

Supply of veneers and splints.

It has, however, been found that a more suitable form of subsidy than a timber monopoly or a reduction of royalty, would be to arrange for the supply by the Department of Industries of splints and veneers at cost price of manufacture. This arrangement would, apart from all other considerations, save freight on 50 per cent. of the material. The Government have therefore sanctioned a scheme framed by the department in consultation with the Forest Department, for putting down a plant at the Government Central Wood Working Institute, where a peeling machine already exists for the manufacture of finished splints and box veneers. These will be made from several species to be drawn initially from the Haldwani division and to be supplemented by supplies from Tarai and Bhabar estates. If the scheme is sanctioned it will be possible to supply splints at Rs. 10-8 per maund and veneers at Rs. 14-8 per gross of boxes. The price of Japanese splints is about Rs. 15 per maund and of veneers about Rs. 20 per hundred gross of boxes.

Extract from the "Indian Trade Journal," dated 9th September 1926, page 443.

MATCH INDUSTRY IN BENGAL DURING 1925.

The following is an extract from the Annual Administration Report of the Department of Industries, Bengal, for the year 1925:—

A number of large and up-to-date match factories have been established in and near Calcutta, eight in all, and the approximate output of these fac-

tories will be of the order of 13,000 gross boxes of matches per diem. The smaller match factories using hand machines have either ceased to exist or are in a moribund condition. It appears that the cottage system for the manufacture of matches will not be able to hold its own and face competition with the modern factories using up-to-date power-driven machinery. As many operations are involved in the production of finished matches and as the products are of comparatively small value, it is unlikely that the manufacture of matches on the cottage system will be successful.

Though many species of wood in the Bengal forests have been found suitable for the manufacture of first class safety matches as a result of the investigations carried out by this Department, little advance has been made in the utilization of these species chiefly on account of the scattered occurrence of these woods and also on account of the unfavourable railway rates.

Most of the factories are using imported logs chiefly from Sweden and Siberia though some of the factories are trying to use Gengwa wood which occurs plentifully in the Sunderbans and which can be brought to Calcutta by means of country boats at a reasonable cost. The available supply of Gengwa wood is, however, not inexhaustible and until systematic cultivation is taken up there can be no security for continuity in this direction. Successful experiments have been carried out by the Industrial Chemist to bleach splints manufactured from Gengwa wood. Though first class splints comparable to the splints made from imported wood could not be produced, nevertheless it has been demonstrated that matches of good quality can be made from this wood. Schemes have been prepared by this Department for different sized match factories, and the conditions, both economic and technical, have been analysed for the benefits of the persons interested in this industry. The chemical composition of matches and the conditions governing the production of damp-proof matches have been studied by the Industrial Chemist with the help of power-driven laboratory machines. First class compositions for match heads have been prepared, and further experiments are now being conducted to ensure the complete success of this industry in Bengal. In conclusion, it can be said that the match industry, in spite of many difficulties, is on the way to success and the factories so far established or contemplated in Bengal are sufficient to meet all her requirements.

(ii) *Note regarding restrictions on foreign capital and foreigners doing business in various countries.*

SWEDEN.

Permission is necessary before a foreigner may engage in trade or manufacturing activities in Sweden. Applicants must be 25 years old and must offer guarantee or security for the payment of rates of taxes to State and municipality for a period of three years. Foreigners must obtain permission to form a trading company or become partner in such company. Only Swedish may found joint stock banking companies or unlimited liability banking companies or be shareholders in banking or railway companies or principal stock-holders in solidary banking companies. Foreign subjects, corporations, or institutions, to a certain extent, are restricted from acquiring shares in ordinary Swedish companies.

SPAIN.

In order that firms may be qualified for receiving certain benefits under Spanish Royal Decree, dated 30th April 1924, they must comply with the following conditions:—

- (1) The Board of Directors and the management must be Spanish, but in the case of limited liability companies one-third of the Board of Directors may be foreigners. No foreigner, however, may be President of the Board or Managing Director.

(2) 75 per cent. of the capital must be owned by Spaniards.

(3) 80 per cent. of the office staff and workmen employed must be of Spanish nationality. During the first three years, however, the employment of foreigners in the following proportions will be permitted: 75 per cent. during the first year, 50 per cent. the second year and 30 per cent. the third year.

(4) The fuel, material and fittings used must be Spanish production, excepting where for technical or other special reasons they have to be obtained from abroad.

JAPAN.

Foreign Corporation.—As explained at length by Mr. T. Miyoke, Barrister-Counsellor at Law, in the August No. of the America-Japan, foreign corporations in Japan are taxed as follows on that portion of the profit which is in excess of 10 per cent. on the invested capital, that is to say:—

	Per cent.
(1) On the amount in excess of 10 per cent. of the capital	4
(2) On the amount in excess of 20 per cent. of the capital	10
(3) On the amount in excess of 30 per cent. of the capital	20
Also on income derived from business or assets in Japan	7½
Thus a foreign corporation will in any case be taxed	7½

FINLAND.

December 14, 1923, law passed relative to the State tax of 8 per cent. on all foreigners drawing interest on deposits in Finnish Banks on dividend on shares held by them in Finnish companies.

FRANCE.

Foreign Insurance Companies in France.

Foreign Insurance Companies required by law of February 15, 1917, to obtain approval of the Government Insurance Companies which have not obtained the authorisation of the Government are not only forbidden to sue but are also liable to a fine of 100 to 5,000 francs; in case of second offence 500 to 10,000 francs.

UNITED KINGDOM.

Profits arising from sources outside of the United Kingdom and utilised by their owner are taxable if owner whether British or foreign is a resident of the United Kingdom for a total of six months in any assessment.

TURKEY.

Formalities in establishing Turkish Companies.

In order to become officially established in Turkey a company must comply with certain regulations in regard to registration, taxation and employees. Registration required declaration of company's proposed business activity, its capital and financial resources. Income-tax is virtually the only tax imposed on private firms and corporations. Employees except heads of Departments, managers and technical assistants must be Turkish subjects and Turkish is the only official language.

Telegram which appeared in the "Rangoon Daily News," on 26th March 1927.

FRENCH MATCH MONOPOLY.

M. Poincare's Statement.

Paris, March 25: M. Poincare made a statement to the Cabinet regarding the Match Monopoly Bill. He said the Company and Board must be exclu-

sively French and foreign holders of shares would not be entitled to any control over the management of the company. The deposit with the State would be roughly a hundred million dollars and also the Company would guarantee an annual payment corresponding to the yield of the monopoly hitherto, *plus* a large share of profits. The State would fix prices.

(iii) *Note regarding restrictions on foreigners.*

1. In the case of limited liability companies, I suggest that:—

(a) No company should be allowed to manufacture matches in India unless it is registered under the Indian Companies Act, 1913, and it has a share capital, the amount of which is expressed in the memorandum of association in rupees.

(b) No company, having for its object the manufacture of matches in India should be registered unless at least 75 per cent. of its authorised capital is reserved for Indians in the first instance for a definite period of time.

(c) No forest concessions or leases should be granted to any company unless at least 75 per cent. of its capital is subscribed by Indians in the first instance.

(d) The number of foreigners on the Board of Directors should not exceed one-third of the total number of Directors. No foreigner, however, should be allowed to be the President of the Board or the Managing Director; no firm more than one-third of whose partners are foreigners should be allowed to become Managing Agents. If possible, every foreigner should be required to obtain permission from the Local Government, to join the Board of Directors or the firm of Managing Agents and the Local Government, before granting such permission shall enquire as to whether the applicant is directly or indirectly connected with any foreign trust or combine, whose activities are in any way prejudicial to the interests of the Indian match industry.

(e) Excise duty must be levied on a sliding scale on the products of those factories which are wholly or partly financed by foreign capital in proportion to the foreign capital employed.

I suggest that the excise duty should be levied in the following manner:—

Where foreign capital does not exceed	20%	1 per cent. of the existing import duty for each per cent. of foreign capital.
Where foreign capital exceeds 20 per cent. but does not exceed	40%	1½ per cent. of the existing import duty for each per cent. of foreign capital.
Where foreign capital exceeds 40 per cent. but does not exceed	60%	1¾ per cent. of the existing import duty for each per cent. of foreign capital.
Where foreign capital exceeds 60 per cent. but does not exceed	80%	1¾ per cent. of the existing import duty for each per cent. of foreign capital.
Where foreign capital exceeds	80%	2 per cent. of the existing import duty for each per cent. of foreign capital.

(f) A company, having more than 25 per cent. of its capital in the hands of foreigners should be required to provide adequate facilities for the training of Indians.

2. FOREIGN INDIVIDUALS AND FIRMS.

No foreign individual or firm should be allowed to start match factories in India. Foreigners should be required to obtain permission from the Local Government to become a partner in a firm having for its object the manufacture of matches in India.

In the case of firms financed partly or wholly by foreign capital, duty should be levied on the same basis as in the case of limited liability companies.

3. TRUSTS AND COMBINES.

To prevent Trusts and Combines from starting match factories in India, I suggest that there should be an anti-Trust legislation.

I desire to make it clear that these detailed suggestions are not yet considered by the Committee of my Chamber but I have thought it fit to put them before you in the hope that they will form a basis for discussion and enquiry.

RANCHORDAS H. GANDHI.



THE BURMA INDIAN CHAMBER OF COMMERCE.

B.—ORAL.

**Evidence of Mr. RANCHORDAS H. GANDHI and Mr. K. M. DESAI,
recorded at Rangoon, on Thursday, the 31st March 1927.**

Introductory.

President.—Do you hold any official position in the Burma Indian Chamber of Commerce, Mr. Gandhi.

Mr. Gandhi.—I am one of the members of the committee of the Chamber.

President.—Who is the President.

Mr. Gandhi.—Mr. Hosein Hamadane is at present the Acting President.

President.—Was it not possible for the President to appear?

Mr. Gandhi.—When the matter came up it was submitted to the Committee and I was selected to represent the Chamber unanimously.

President.—And Mr. Desai?

Mr. Gandhi.—He is the Secretary: he will assist me.

President.—Are almost all the Indian firms members of your Chamber?

Mr. Desai.—Most of them. We have 170 members.

President.—So that you practically represent Indian interests in Burma?

Mr. Desai.—Yes.

President.—What are the chief trades that are represented?

Mr. Gandhi.—Rice, timber, chemicals, industries and many others.

Dr. Matthai.—All the match industries here are members?

Mr. Gandhi.—Yes. All sections of the Indian trade are represented.

Dr. Matthai.—How long ago was your Chamber formed?

Mr. Desai.—In May 1925.

President.—Are any of your members also members of the Burma Chamber of Commerce?

Mr. Gandhi.—Very few. Messrs. Tatas and Adamjees are the only members who are also members of the Burma Chamber.

Dr. Matthai.—Is the Burma Match Company a member of your Chamber?

Mr. Desai.—No.

Mr. Gandhi.—I should draw your attention to the fact that we keep our membership open to all, not to Indians alone.

Mr. Mathias.—Which match factories in Burma are your members?

Mr. Gandhi.—Messrs. Adamjee Hajee Dawood and Company and the Rangoon Match Works.

Mr. Mathias.—And the Muslim Match Factory?

Mr. Gandhi.—They are not, but Mr. Abowath, who is the proprietor of the Muslim Match Factory is a member.

The Chamber's Representation.

President.—In the representation that you sent on the 30th November, 1926, you claimed that the industry fulfils the conditions laid down by the Fiscal Commission and you proposed that the present revenue duty should be declared a protective duty and should be maintained at its present level?

Mr. Gandhi.—Yes.

President.—There is a proposal by Messrs. Adamjee Hajee Dawood and Company, I think, that this duty should be increased to Rs. 2. What are your views? Do you think it should be kept at the present level?

Mr. Gandhi.—I think so.

President.—Do you object to any increase in the duty on the ground that it would raise the cost to the consumer?

Mr. Gandhi.—That is one consideration. Besides that I would like to lay before the Board my own proposals for the encouragement of Indian industry.

President.—Do you mean those you have given in paragraph 8 of your representation?

Mr. Gandhi.—I say that I do not want the duty to be raised to Rs. 2 for the reason that it would fall on the consumer, and then I propose certain safeguards by imposing restrictions on foreign capital.

President.—But supposing we came to the conclusion that an increase of duty was necessary and we also came to the conclusion that any increase in the duty will not raise the price of matches owing to internal competition, would you still have any objection?

Mr. Gandhi.—We would not oppose if you add a small amount.

Mr. Mathias.—What would you call a small amount?

Mr. Gandhi.—Four to eight annas.

Dr. Matthai.—You mean you won't object to a duty which would raise the price to the consumer by four to eight annas?

Mr. Gandhi.—Yes, provided my other conditions are fulfilled.

President.—At present it does not seem as if the duty has very largely influenced the course of prices. It has been shown that Japanese matches, for instance free of duty are sold at about 12 to 14 annas a gross and with the duty at about Rs. 2-2-0.

Mr. Gandhi.—There must be other factors also.

President.—The Swedish matches are sold at about Rs. 2-10-0, so it does not seem as if the duty has made very much difference to the selling price. There are other factors apparently at work which have helped to keep down the rise in prices.

Mr. Gandhi.—The whole of the duty would not be lost, I mean there must be some increase. It may not operate to the full extent, nevertheless it is bound to operate to a limited extent, other factors operating at the same time.

President.—That is true, but supposing the duty fulfils the purpose and leads to production on a large scale of matches in the country, then the prices will be regulated by internal competition, so that it does not necessarily follow that the import duty would raise the price of Indian matches. The duties may have the effect of keeping out foreign matches, but from that it does not follow that the Indian manufacturer of matches will be able to raise his price because of internal competition.

Mr. Mathias.—Even the price of imported matches, would be fixed by internal competition.

Mr. Gandhi.—Competition will have its influence felt, no doubt, but there are certain things to be considered. Suppose you recommend an increase of the duty not to Rs. 2 but to Rs. 3-8-0, then it would be too much for the consumer.

Mr. Mathias.—True, at the beginning it may have that effect, but once people begin to produce matches in the country—let us assume that there is no combination among the manufacturers and the prices are governed more or less by economic causes—in that case a high import duty would not necessarily have the effect of raising the internal price or enable the industry to get a higher price than it ought to get?

Mr. Gandhi.—Foreign goods are bound to come in for a number of years in the present conditions of the industry.

Dr. Matthai.—Your point is that prices may not rise in proportion to the duty?

Mr. Gandhi.—Yes, and existing circumstances are not going to change for a number of years, I mean foreign imports and the semi-foreign Indian factories here. My figures for this year also show that the imports have not gone down so much and there is not much difference between last year and this year. From these returns we must come to the conclusion that it is not continuously dwindling down.

President.—That is true. But at present the Indian manufacture of matches is not equal to the demand of the country. We contemplate a time when, if protection is recommended and the policy succeeds, India would be able to produce its requirements.

Mr. Gandhi.—That will be a period which will take not less than 10 years to come.

President.—It does not necessarily follow if you look at the progress the industry has made with the last year or so.

Mr. Gandhi.—But I say the progress is not so much as you are giving importance to. That is what I am trying to point out. Even the import figures have not come down to the extent we anticipated. There is a set back one year, then again there is a rise, I mean there is no steady decline; there are other factors operating and again there is a rush of imports. There is no continuous fall. If there was, I would certainly have agreed the Indian match industry is making headway.

Dr. Matthai.—In four years it has fallen from 13½ millions to 7½ millions, about half in four years.

Mr. Gandhi.—I am comparing last year's and this year's figures.

Dr. Matthai.—I am not comparing last year and this year. I am referring to the last four years. If you take into consideration the fact that it takes a little time to erect a large factory you will admit that is a remarkable progress.

Mr. Gandhi.—Nevertheless there are other factors, prejudice against Indian matches, training of labour, supervision and various other things, regular supply of wood, then there is the question of supply of capital. If we take all these into consideration and the present condition of India about raising new capital at a stroke, I say we must not come to the conclusion that it would be so rapid as to create fears about loss of revenue at a very high speed.

Dr. Matthai.—That is to say taking Burma the increase in the output of local factories in the past two years cannot be taken as the measure of the progress that is possible in the future?

Mr. Gandhi.—That is so.

President.—Your contention is that Government should not take into account this factor of revenue to any great extent?

Mr. Gandhi.—That is my main suggestion, and I ask you to declare it a protective duty. That is what I mean.

President.—But supposing it is found that this is a good source of revenue for Government, why should they give it up provided the interests of the industry are at the same time safeguarded?

Mr. Gandhi.—That is what I am aiming at. I mean to say that the interest of the country and also the Government revenue will be safeguarded in the long run. If you take a long view of the thing, Government is not going to suffer to a large extent.

President.—You say Government will not suffer very much because they will get the duty on the materials?

Mr. Gandhi.—I have got figures with me showing an increase of about Rs. 8 lakhs in the import duty from several chemicals used in the manufacture of matches during this period, though I don't mean to say that all these chemicals were exclusively used for match making.

President.—The way to look at it is this. Supposing the total value of the materials—I don't know what the exact figure is—taken together is 4 annas and the value of wood is, say 4 annas, that is 8 annas. If the Government gets a duty of 15 per cent. *ad valorem* it comes to only $1\frac{1}{4}$ annas. But the Government expects to get Rs. 1-8-0 per gross, so that the result will be that Government may recover $1\frac{1}{4}$ annas through the materials but loses Rs. 1-8-0 on the finished article.

Mr. Gandhi.—You have not taken the income-tax into account.

President.—I am coming to that. Income-tax can only arise out of profits. If you take a gross of matches at Rs. 1-8-0 and supposing you add 10 or 12 per cent. on it, it comes to 2 annas. The income Government would get on 2 annas would be very small, it would not be a substantial figure. Even if you apply the super-tax rate, it would only get about a quarter of an anna. You see, Mr. Gandhi, these two sources of revenue would not bring to Government more than 3 annas a gross whereas Government gets a duty of Rs. 1-8-0.

Mr. Gandhi.—These are hypothetical figures.

President.—No. Mr. Bawaney claimed that Rs. 1-8-0 was his cost of production. That is what we got from them. I am just trying to point out that if the Government looked at it purely from the revenue point of view, it would be a pity to let it go and in such a case some method must be devised by which Government does not lose its revenue.

Mr. Gandhi.—According to your calculation even if it comes to 8 or 10 annas Government would lose annas 14 to rupee 1. To that extent it may be true but you must look at the larger aspect of the question.

President.—Government looks at it from a material point of view. If Government finds it is a very useful source of revenue and that people have got used to paying this tax, and that it would be a pity to let it go, in such a case some method must be devised by which Government does not lose its revenue.

Mr. Gandhi.—I agree to some extent, but I don't agree with your conclusion that it necessarily follows that all foreign imports will cease.

President.—That is the aim of protection. We are assuming that the imports will disappear. They have fallen down by about 40 per cent. The policy of protection will have failed if foreign matches still enter the country.

Mr. Gandhi.—If 10 or 20 per cent. still enters.....

President.—Why should even 5 per cent. enter if the policy of protection succeeds?

Mr. Gandhi.—It must take time for the imports to fall off completely.

President.—Therefore in making our proposals we have to consider this: Supposing Government wanted to get the revenue and at the same time desired that if a case was made out the industry should be protected, then is there any escape from an excise duty?

Mr. Gandhi.—The excise duty would, as you know, be a burden on the indigenous industry.

President.—Not necessarily.

Mr. Gandhi.—We removed the excise duty on the same ground from cotton.

President.—That was quite a different thing. The position here is this. Before the imposition of the duty the prices of imported matches were Re. 1-2-0. The Government imposed a duty of Rs. 1-8-0. Therefore the Government intended that matches should be sold at Rs. 2-10-0. To-day Indian matches are sold in the country at Rs. 1-8-0 or Rs. 1-12-0, so that if an excise of one rupee was added to it, then the price of Indian matches will not rise very much above Rs. 2-12-0 and the price of foreign matches would rise to about Rs. 3-10-0.

Mr. Gandhi.—I am not sure of maintaining these proportions. I think that, as developments occur, the prices may vary during the course of 3, 5 or 7 years.

President.—But the incidence of the duty is limited by the amount of the duty. Prices may vary. If you put one rupee duty, its incidence cannot be higher than one rupee.

Mr. Gandhi.—It won't be higher.

President.—It may be lower.

Mr. Gandhi.—I grant you that.

President.—The point I am trying to explain to you is this: At the time of the imposition of the duty Government contemplated that for matches in the country, the consumer should pay Rs. 2 to Rs. 2-10-0. If the price to the consumer does not rise much above that.....

Mr. Gandhi.—But they are getting an inferior quality of matches.

President.—That is a point we have to take into account. Apart from the question of quality it would not be unfair to the consumer if he was made to contribute what Government originally intended that he should.

Mr. Gandhi.—I cannot agree wholly, because there are certain factors which are always operating.

President.—They will operate whatever the position is. I am trying to point out to you that so long as the price of matches in the country does not rise much above the level that the Government intended when it imposed a duty of Rs. 1-8-0, you would not have any serious objection.

Mr. Gandhi.—I would have serious objection. I want the whole situation reconsidered, because those factors on which the Government based their decision 3 years before are not the only considerations which should weigh at present.

President.—We are prepared to take into consideration all the factors that you may mention. I am putting to you a simple proposition. Government wants a certain amount of revenue from matches. It fixes that at Rs. 1-8-0 on the imports. Government then intended that the consumer of matches should buy his matches at Rs. 2 or Rs. 2-10-0. Now the position is that the prices are not governed in this way.

Mr. Gandhi.—Why do you take it for granted that Government came to that fixed limit of Rs. 2-10-0? Why should we not think Government at that time must have based the idea of prices on previous experience that the duty amount and the prices don't always tally. I should request you to see why you take the maximum amount that Government intended should be paid by the consumer.

President.—So far as its revenue was concerned, it budgetted at that. At the time of the imposition of the duty it must consider how it would affect the consumer if the prices rose to the full level of the duty.

Mr. Gandhi.—Our own experience will show that Government was not right. Prices are not keeping pace with the duty.

President.—As a matter of fact Swedish matches are being sold at Rs. 2-10-0 a gross.

Mr. Mathias.—May I put it this way? In imposing a tax, it is obvious Government must consider the maximum burden which it thinks might be borne by the consumer and the maximum burden as the President has explained to you just now would be about Rs. 2-10-0.

Mr. Gandhi.—Government only thought that the maximum would be Rs. 1-8-0.

Mr. Mathias.—The duty is Rs. 1-8-0. By maximum burden I referred to the price.

President.—If the price rules at about that level, then the consumer cannot complain that the position is much worse under the excise duty than it would be under the customs.

Mr. Gandhi.—He is likely to complain that it is higher.

President.—If the price of matches is to improve; if there is no manufacture in the country and if he has to depend on the foreign matches, then he may have reason to complain.

Mr. Desai.—At present people are accustomed to the Indian price. They are getting Indian matches at Rs. 1-10-0.

President.—But then the Government says "We are losing revenue. We have enabled you to get the matches cheaper and so we must have a share of the revenue".

Mr. Desai.—Matches are used even by the poorest men.

President.—So is salt and so are good many things. We are not going into that question.

Dr. Matthai.—Is it your suggestion that when the Government imposed duty of Rs. 1-8-0 it imposed too high a duty?

Mr. Gandhi.—If there is no possibility of the development of the Match industry, I would consider the imposition of Rs. 1-8-0 as too heavy, but it has fortunately helped the development of the Match Industry.

President.—It doesn't seem to have interfered with the demand. The demand is going up. One test of taxation is whether first of all it reduces consumption and secondly whether it raises the prices. In both these respects the country has been very fortunate. It has not raised the price nor has it reduced the consumption. What has happened is that it has reduced the Government revenue.

Mr. Gandhi.—But it has not increased the consumption.

President.—There is some evidence that it has. If you take into account the manufacture in India, there is some evidence that anyhow it has not decreased.

Dr. Matthai.—All that it has done is that it has reduced the imports and consequently the revenue.

President.—It is one of the things we have got to enquire into and report on. It is for that reason I am asking you.

Mr. Gandhi.—My contention is that the consumer must not be made to pay anything higher than what he is paying to-day.

Mr. Desai.—He should not be made to pay anything more than what is absolutely necessary for the development of the industry.

President.—The consumer should not be made to pay more for Indian matches than he would if he were to depend on foreign matches.

Mr. Gandhi.—If we can arrange in such a way that he would not have the necessity to pay higher, then we must devise means without raising the duty.

President.—What will happen is this. Supposing we put an excise duty of one rupee and we increase the import duty by Re. 1, the relative position remains the same. Then if there is more production in the country and there is more competition in the country, it may happen that in spite of the excise duty the consumer would get his matches cheaper.

Mr. Gandhi.—While you make sure of the revenue, only the consumer has the chance. The chance may also work against him. That is also possible.

President.—Quite. In making our proposals we have got to take into account what would be the price that the consumer will have to pay in the long run.

Mr. Gandhi.—I would like to put it in another way: Let the Government continue the duty at present and watch the movement for the next three or five years.

President.—It is a very serious risk for the Government to run. It is like any other tax.

Mr. Gandhi.—I quite understand and appreciate.

President.—If you impose a tax, you complain about it and say "this is inevitable and we have to pay it." But if, after having removed a tax, the Government wants to re-impose it they will get serious criticism.

Mr. Gandhi.—I don't suggest a reduction of the tax. I suggest to keep the duty at Rs. 1-8-0.

President.—What I mean is that to the extent the Government revenue decreases the tax decreases.

Mr. Gandhi.—Certainly it would.

President.—If the Government allows that tax to decrease, it is very difficult for the Government afterwards to re-impose it.

Mr. Gandhi.—I don't follow why it would be difficult.

President.—Every Chamber of Commerce will say "Now for 5 years we have paid no tax. Why should Government impose any fresh taxation"?

Mr. Gandhi.—Do you want me to say things which are contrary to what every other Chamber says?

President.—You are perfectly entitled to say what you want. But the Government are also entitled to say "Why should we court trouble. Here are people paying this tax, let them go on paying".

Mr. Gandhi.—My point is that there is not a large decrease in revenue. It is only Rs. 36 lakhs or something like that.

President.—That is a big sum.

Mr. Gandhi.—It does not come to even $\frac{2}{3}$ per cent. of the military expenditure.

President.—We are given certain figures and they show that the revenue is steadily decreasing. From the practical point of view if the Government really desires to get this revenue, it should see that it is not allowed to lapse.

Mr. Gandhi.—I don't see in the Communiqué so much emphasis laid as you make out. There is plenty of latitude given to the Board in the Communiqué.

Mr. Mathias.—It is really a question of ways and means. Whether Government imposes an additional tax or not is a matter which must be decided by the Government and the Legislative Assembly. We are concerned with considering the ways and means, which Government may or may not approve of making good the deficiency in revenue.

Mr. Gandhi.—So far as I am concerned, I should put it this way that Government must declare the match industry as a protected one irrespective of other considerations. I am not in a position to give you a correct idea in favour of my proposition aided by figures, because there are no figures available either on this side or on that side.

Mr. Mathias.—The business before the Board is to suggest ways and means. If Government and the Legislative Assembly decide that it is desirable to obtain an additional revenue of Rs. 36 lakhs from the Match Industry, what are the ways and means which the Board would suggest by which such a tax could be imposed with the least trouble.

Mr. Gandhi.—That I have put in one of my suggestions. At least for some time it would be effective in creating more revenue for the Government. If you like I would give you a copy (handed in a note regarding restrictions on foreigners).

Mr. Mathias.—Are you empowered to place this before the Board as the opinion of the Chamber?

Mr. Gandhi.—The Chamber's views are summed up in paragraph 8 of their letter dated 30th November, 1926. They say:—

"The import duty on matches, splints and veneers should be declared a protective duty and the present rates of duty should be maintained.

A discriminating excise duty on the product of factories, financed wholly or mainly by foreign capital must be levied; but under no circumstances should any burden be imposed on factories run purely by Indian capital and Indian enterprise".

In that general way my Committee has approved of this, but I have on my own initiative put in the details.

Mr. Mathias.—But the Chamber is not in any way committed to these details.

Mr. Gandhi.—Certainly not. I had no time to put it before the Committee.

President.—Of course we should consider your views, but it would be better if the Chamber supported your views.

Mr. Gandhi.—I will put these details before the Committee and will let you know afterwards.

President.—Your suggestion is that there should be a sort of differential treatment as between foreign and Indian firms. The first thing is that you are apparently referring to the Swedish Trust, is not that so?

Mr. Gandhi.—Yes.

President.—As far as we have any evidence, the Trust seems to operate in a peculiar way. It does not come forward as a Swedish Company. But it does many of the things you mention.

Mr. Gandhi.—I know that.

President.—It starts a company in the country with rupee capital. On the Board of Directors of the Company, there are well-known Indians.

Mr. Gandhi.—They are in a minority. Out of seven, there are only three Indians in the case of the Assam Match Company.

Dr. Matthai.—The capital is rupee capital.

Mr. Gandhi.—Yes.

President.—You cannot treat British subjects as foreigners.

Mr. Gandhi.—In this enquiry English competition must be treated as foreign competition.

President.—What they have done in this case is this. First of all, there was the Swedish Company. Then, they floated extra capital outside Sweden, particularly in Great Britain. In that way British capital has been brought in. At present, so far as we are concerned, I don't think that it would be right to describe that as foreign capital.

Mr. Gandhi.—Subject to the conditions laid down by the External Capital Committee.

President.—Having done that, they come to India and they also go to other countries. They start a local company in the currency of the country and get a majority of Directors who are not Swedes. They are either residents of the country or British subjects. Therefore it is very difficult for instance to describe this capital, if it operates in this way, as an entirely foreign capital.

Mr. Gandhi.—By whatever name you may describe it, you must agree with me that it is very essential for the welfare of India that the Indian manufacturers must be protected against what we may call unfair competition.

President.—I am trying to point out to you the difficulties.

Mr. Gandhi.—I quite realise the difficulties. In the present state of conditions I admit that it is very difficult to find out a proper solution to remedy this evil.

President.—Supposing the foreign capital has made up its mind that it shall establish itself in this country or in any other foreign country, then every time you devise something to meet a particular condition, it would devise something which would enable it to evade that condition.

Mr. Gandhi.—Not always.

President.—Now we will take your conditions one by one. You say that no company should be allowed to manufacture matches in India unless it is registered under the Indian Companies Act, 1913, and it has a share capital the amount of which is expressed in the memorandum of association in rupees. That has been done.

Mr. Gandhi.—Yes.

President.—Then you say that no company, having for its object the manufacture of matches in India, should be registered unless at least 75 per cent. of its authorised capital is reserved for Indians in the first instance for a definite period of time. First of all, supposing they cannot get 75 per cent. capital from Indians, do you mean to say that the industry should not be started here?

Mr. Gandhi.—“In the first instance and for a definite period”—I have qualified my statement to that extent.

Mr. Mathias.—Will your condition be fulfilled if the prospectus states that three-fourths of the capital will be reserved for Indians for three months or say six months?

Mr. Gandhi.—I would put even a longer period.

Mr. Mathias.—Is that your intention?

Mr. Gandhi.—My intention is that you must give them some time.

Dr. Matthai.—After that period, you would make no restrictions.

Mr. Gandhi.—The restrictions would continue.

Dr. Matthai.—I mean as far as the reservation of capital is concerned.

Mr. Gandhi.—Further on I have suggested that Government sanction is required for doing certain things

Dr. Matthai.—Won't that depress the value of the shares in the country?

Mr. Gandhi.—Yes.

Dr. Matthai.—That is a serious matter for a new concern.

Mr. Gandhi.—Quite.

President.—This was one of the points considered by the External Capital Committee. Supposing they reserved 75 per cent. of capital for Indians and they got Indians X, Y & Z to take it up, the condition being that, after the period of three months, the shares should be transferred to Swedes or their nominees, how could you stop that?

Mr. Gandhi.—My own opinion is that in the present condition of things, if the match industry is declared to be a protected industry, there would not be much difficulty in raising the required capital. Indian capital would certainly be forthcoming provided of course Government declared the Match Industry to be a protected industry.

President.—You want 75 per cent. of capital to be first subscribed by Indians. They will say “all right, we have got the capital”. They get dummies X, Y, Z to subscribe for that amount. After three months, the law of the Trust is such that they cannot continue in the Trust afterwards without going to jail. That being so, the foreigner is quite safe in having a sort of *benami* transaction and he may say after the period has expired “now, come along, transfer the shares to me”. What is your remedy for that?

Mr. Mathias.—Even without *benami* transaction, you have heard of people applying for shares in a new issue in order to sell them for a fractional profit.

Mr. Gandhi.—There would be cases, but there would not be many provide my sliding scale is adopted.

President.—I shall come to that presently. The objection to the sliding scale is this that it would vary.

Mr. Gandhi.—It must.

President.—Then, it would mean this that no one would buy those shares because the value of the shares will fluctuate according to the sliding scale. Who would invest in an industry like that, the return from which is so uncertain?

Mr. Gandhi.—There are countries which do that.

Mr. Mathias.—Can you name the countries and the companies?

Mr. Gandhi.—Yes handed in a note on “Restrictions on foreign capital and foreigners doing business in various countries”

Mr. Mathias.—Under Spain, it is stated that in order that firms may be qualified for receiving *certain benefits* under Spanish Royal Decree, they must comply with some conditions. May I ask what those “certain benefits” are?

Mr. Gandhi.—They were not mentioned in the Board of Trade Journal from which I copied this.

Mr. Mathias.—Presumably they must be bounties.

Mr. Gandhi.—May be.

President.—Where did you get this information from?

Mr. Gandhi.—I shall send you the sources of information from which I have copied all these, later.

Mr. Mathias.—Take the case of Sweden. You don't say when the legislation was brought in. It is rather important to know that.

Mr. Gandhi.—We have not omitted or added anything. We have simply copied from the official organ of the Board of Trade published in London.

Mr. Mathias.—Have you any information as to the dates on which these laws were introduced in those countries?

Mr. Gandhi.—I have no further information.

President.—As regards the argument contained in (b) of your note on “Restrictions on foreigners,” it was fully discussed by the External Capital Committee. They came to the conclusion that in the first place it would be easy to evade those conditions and that, in the second place, it would so affect the value of the shares that capital would not be forthcoming. I have no views on that subject. I am simply trying to point out what has been done before.

Mr. Gandhi.—My own views are that these Indian factories are to be found all over India and that they are not like a monopoly or a new industry of which people do not know at all. Therefore I do believe that there would not be such dearth of capital that shares would go down.

Dr. Matthai.—You think that for the match industry sufficient capital would be forthcoming in India.

Mr. Gandhi.—Yes. Supposing the match factories in Bombay are not getting sufficient amount of capital in Bombay

Dr. Matthai.—Some other provincial market will come forward.

Mr. Gandhi.—Burma, Bengal or Madras may come in. There would not be any difficulty.

Dr. Matthai.—The difficulty may arise if the industry is on a very large scale and involving a very large amount of capital. In the case of a new match company, in the near future, the operations are not likely to be on so large a scale as to make it impossible to raise capital in India. Is that your point?

Mr. Gandhi.—Yes. It would not be so difficult as, say, in the case of the Steel Industry.

Dr. Matthai.—Or like a railway company.

Mr. Gandhi.—Yes.

Dr. Matthai.—May I raise a small point? You say that 75 per cent. of the capital should be reserved. Supposing they arranged capital in such a way that 75 per cent. of the capital carried with it only 25 per cent. of the voting power, thus retaining the control in their own hands.

Mr. Gandhi.—As I expect that the future match companies will bring in dividends, the profits should go to the country.

Dr. Matthai.—I take it that you are not objecting necessarily to foreign capital as such because you are getting various advantages by the use of foreign capital. What you are objecting to is not foreign capital but a foreign monopoly.

Mr. Gandhi.—Both

Dr. Matthai.—Even to a foreign concern working in ordinary competition with Indian concerns.

Mr. Gandhi.—I object to big concerns which would eventually be in possession of the whole market.

Dr. Matthai.—Not necessarily in possession of the whole market.

Mr. Gandhi.—If a foreign company operates in such a way as to ruin Indian manufacturers, to that extent I am opposed to foreign capital.

Mr. Mathias.—Does it not come to this that you are opposed to a trust?

Mr. Gandhi.—I am opposed to a trust.

Mr. Mathias.—What I am not quite clear about is whether you are opposed to a trust as such or whether you are opposed to foreign capital in competition with Indians here.

Mr. Gandhi.—I am opposed to trusts of all kinds, because the burden would eventually fall on the consumer. As there is no Indian trust in existence and as there is no likelihood of any Indian trust being started, I am not referring to that at all.

Mr. Mathias.—That does not mean that you are opposed to foreign capital as such. You are opposed to foreign capital only when it acts as a monopoly.

Mr. Desai.—I am opposed to foreign capital being employed in an industry which is protected.

Dr. Matthai.—We are speaking of the match industry for the time being. Supposing you have an industry for the development of which it is impossible to raise enough money in India, in that case, you would not rule out foreign capital, would you?

President.—But by foreign capital you mean entirely alien capital, do you not? Supposing a British company came here instead of the Swedish, would you object?

Mr. Gandhi.—I would follow the line of argument of the External Capital Committee about a certain percentage of Indian directors and so on.

President.—That can be complied with, but at the same time the capital may be still foreign, the control may be foreign.

Mr. Gandhi.—Then I would certainly object.

President.—How can you make your objection effective?

Mr. Gandhi.—The remedy is to be devised. I am afraid I can't suggest any remedy, but why anticipate the difficulty?

President.—So far these people have complied with many of the conditions laid down by the External Capital Committee, but at the same time you say the foreign capital is there; it is operating in this way.

Mr. Gandhi.—To some extent. I have made some recommendations which would go a long way towards progress, nevertheless if the recommendations fall short of the expectations, I hope the Tariff Board will enquire into the matter further and find means to help the industry.

President.—The Tariff Board is very glad that you have made these suggestions and they would consider all the points. But I am just trying to point out to you that the suggestions may be all right, but the thing is how to make it effective. How are we going to do it?

Mr. Gandhi.—As a lay man I am afraid I cannot suggest anything.

President.—Your main contention is this, that some of the conditions may be evaded but that it is not possible for them to evade all of them successfully.

Mr. Mathias.—In any case it would give Indians an insight into the industry of match making and some of your conditions would ensure that Indians would be given practical training for higher appointments; to that extent you suggest that your recommendations would benefit the country. Is that right?

Mr. Gandhi.—That is so.

Mr. Mathias.—But you would not claim, I gather, that these proposals which you have put forward will be necessarily effective in preventing a combination and control by foreigners to the detriment of the Indian industry?

Mr. Gandhi.—To an appreciable extent it would prevent foreign concerns coming in the way of Indian industries.

Mr. Mathias.—Do you claim that these conditions are such as could not be got round by any enterprising foreign firm.

Mr. Gandhi.—In human affairs underhand dealings are not preventible.

Mr. Mathias.—Quite so. I wanted to ascertain to what extent you think your proposals would be effective.

Mr. Gandhi.—To some extent my proposals go further than the External Capital Committee's recommendations.

Dr. Matthai.—What you suggest is that the existence of a law of this kind may not entirely prevent the evil, but minimise it; that is the real position, is it not?

Mr. Gandhi.—Yes, to an appreciable extent.

President.—The thing is that it would be to the advantage of this country that whilst it should be able to protect itself against foreign monopoly and the employment of foreign capital, it should not frighten away all foreign capital.

Mr. Gandhi.—There is already foreign capital in India; it has not been frightened away and I have put my proposals in a way that it will not force them to give up their factories. I have put it in quite a compromising way.

President.—In (c) and (d) also there is this question how to enforce this rule about 75 per cent. of the capital being subscribed by Indians. In (d) you say "If possible, every foreigner should be required to obtain permission from the local Government, to join the Board of Directors or the firm of Managing Agents, and the local Government before granting such permission shall enquire as to whether the applicant is directly or indirectly connected with any foreign Trust or combine whose activities are in any way prejudicial to the interests of the Indian match industry." You would be throwing on the Government on the one hand very troublesome duties and on the other the directors may have to be appointed at once and the business may be seriously damaged if there was any delay in the appointment of the Board of Directors.

Mr. Gandhi.—I don't think a *bond fide* concern would take a long time in appointing the Board of Directors. It would not be difficult to make enquiries about the persons in the province where the factories are situated, and it would not necessarily take a long time.

Mr. Mathias.—Who is to know that the man making the enquiry does not belong to the trust?

Dr. Matthai.—It is quite easy in our country to raise dummy directors?

President.—They may have all Indian directors in name but the power behind the throne may be entirely foreign. It is very easy to get 5 names. In fact to-day you would find very big names on the board of directors in odd places who do nothing at all but simply go and earn their fees, while the real directors and managers are entirely different from the actual board of directors. This is quite common, not only in India but everywhere. So that in a condition like that it cannot be enforced at all.

Mr. Gandhi.—Do you mean to say it would entail any serious hardships?

President.—They will say "We will get five Indians who will constitute the board of directors." They attend the meetings and their names will be entered in the minutes while at the same time the real directors may be foreigners who will entirely control the show. If you are to impose a restriction, it must be such that it can be reasonably enforced at any rate.

Mr. Gandhi.—I am not in a position to give you exact details.

President.—Even to-day take the board of directors in any company in London, Calcutta or Bombay. They are directors only in name and you will find the names of some of these men appearing in 30 different companies; they attend the meetings, add respectability to the Board: they get their fees and there their responsibility ends.

Mr. Gandhi.—I have made these suggestions and I leave the rest to the Board. If they can find a better solution, that will be to the advantage of the industry.

President.—In the next paragraph you suggest a sliding scale. As I have pointed out to you earlier it means that the shareholders' list has to be maintained according to a particular percentage. To-day, for instance, there is 40 per cent. of foreign capital, I have taken 100 shares. They will charge 1½; tomorrow some other shareholders change their minds and they say "we will sell these holdings to foreigners. Then I suffer; I say I maintain the same number of shares, I have not done anything and then I say why should I put in my capital in a company like this because I do not know what is going to happen. Would not this difficulty arise?

Mr. Gandhi.—I don't think so, because notwithstanding all precautions these changes are likely to happen.

President.—It would frighten away capital. To-day the percentage of foreign capital is 40 per cent.; I don't mind. But some of the shares might change hands all of a sudden and then I find that the dividend has been reduced by half and I lose the value of the shares. In such a case I will say I am not going to invest in a company like this, because I do not know how my shares will stand.

Mr. Gandhi.—There will be so many less foreign companies. This provides against the tendency you have mentioned. It would ultimately come to this that Indians would begin to realize that it would be safer to have their own companies.

Mr. Mathias.—May I suggest that it would also apply to an absolutely Indian company. I will say 50 per cent. of the shares are held by foreigners at a particular time?

Mr. Gandhi.—If an Indian company behaves in a way which does not help the industry, then it must bear the consequences.

Mr. Mathias.—My point is this, that in such a case you will find no one will invest in the match making industry at all.

Mr. Gandhi.—I don't think so. There are precedents in other countries, specially Japan.

President.—Then there is another objection. You know there are two kinds of limited liability companies, the private company and the public company. In the private company, supposing two men form a company, in that case now could you enforce any of these restrictions? A private company has got many advantages one of them being that it can easily evade the law and another is that it enables public companies to be started. As you know they are started as private companies and then they float a public company. It would be fatal to business if the private companies were subject to these restrictions because public companies won't be started then. When you talk of a company do you mean a public company?

Mr. Gandhi.—I mean a public company but nevertheless I never meant that private companies should take advantage of that.

President.—But they can quite easily.

Mr. Gandhi.—Then the whole plan will be frustrated.

President.—Take the case of the Swedish Trust. It takes two other Indians and these three become a private company. There is no sale of shares; you don't know what is happening. Their nominal capital may be Rs. 100 or Rs. 500 but at the same time their real capital may run into crores. In that case you cannot apply this sliding scale so long as there are three shares.

Mr. Gandhi.—Then I would suggest a sliding scale with sliding scale on profits also, because the nominal capital may be anything but the real capital must be big otherwise there would not be big dealings, so I would go so far as to supplement my suggestion that there should be a sliding scale with a sliding scale on profits also.

President.—It will happen like this. The income-tax authorities do not know what the profits are because they will say "our capital is Rs. 1,00,000 but we have to employ an expert on Rs. 30,000 a year? No one can say they should not spend Rs. 30,000 on an expert. All the profits will then disappear. You cannot prevent a company from employing anyone he likes.

Mr. Gandhi.—I have already stated at the outset that my plan is incomplete, but why anticipate these difficulties?

Dr. Matthai.—It would be less objectionable to levy an income-tax in the case of both private and public companies, would it not?

Mr. Gandhi.—I would not object to that.

Dr. Matthai.—Assuming that other objections do not stand, that would be a less unsatisfactory way of doing it?

President.—As regards foreign individuals and firms, they are open to the same objection that we have discussed.

Mr. Gandhi.—Yes.

President.—The last point about Trusts and Combines is an important one.

Mr. Gandhi.—Yes.

President.—You object to any trust whether it is foreign or Indian, is not that so?

Mr. Gandhi.—Yes.

President.—And therefore you suggest some anti-trust legislation.

Mr. Gandhi.—Yes.

President.—You have not told us what form that anti-trust legislation should take.

Mr. Gandhi.—My difficulty was that I couldn't get copies of the American legislation.

President.—Do you think that the American legislation has been successful?

Mr. Gandhi.—I also know that it has not been successful to a very large extent.

Dr. Matthai.—It is hardly successful.

Mr. Gandhi.—That is a matter of opinion. As far as I am concerned I have not that up-to-date knowledge on which I can give any definite opinion as to its success or partial success or failure.

President.—Now take the case of the Swedish Company. This Company has already established itself to a certain extent in India. Supposing Government said "we must stop this," do you think that Government would be justified in adopting that course after the Company has established itself to some extent in the country? Of course if the law says that a certain thing has ceased to be lawful, the party has to take the consequence, but before the law is enacted, Government has got to take into account the fact whether the law should be applied with a sort of retrospective effect. The answer may be that the Company must have known the risk attached to the formation of a trust.

Mr. Gandhi.—If I go to America, I have to obey the American laws.

President.—You have got to obey the law of the country, but when the country changes the law that country has got to take into account how it is going to affect people who have come into the country already and invested their capital.

Mr. Gandhi.—If it doesn't come into conflict with Indian interests to that extent, I would have no objection to Government taking that into account,

but if it comes into conflict with Indian capital or Indian industry, then I don't think it is the duty of Government to consider their nationalities in deciding their policy.

Dr. Matthai.—You may go into a country for a lawful purpose, but when after having gone you engage in practices which are unlawful, the country is entitled to say "It was all right when you first came in, but since then, you have been doing things which are against public interest."

Mr. Gandhi.—Yes. Though I would not think him guilty of doing anything wrong, yet I would ask him to cease doing in future.

President.—Have you any evidence as to how these foreign companies are operating in Burma?

Mr. Gandhi.—I have no particular knowledge about Burma, but I can give you a general idea about the existence of the trust. I can refer you to your opening speech. Mr. Troup also in his report has mentioned something about this trust.

President.—It is a very ancient document.

Mr. Gandhi.—The Trust is more ancient than that.

Dr. Matthai.—His information is from a German, I understand.

Mr. Gandhi.—It is from the American Consul at Kobe. In paragraph 5 **Mr. Troup has mentioned how the Trust is operating in Japan.**

President.—I don't express any opinion. I want to know whether you have any evidence as to how the Trust has been operating in Burma.

Mr. Gandhi.—What may be called legal evidence, I have none, but I have circumstantial evidence.

President.—Circumstantial evidence is very often very legal.

Mr. Gandhi.—This is an extract from the speech of Mr. Ivan Kreuger, Managing Director of the Swedish Match Company, at the meeting of the shareholders held in London on 15th May, 1925.

President.—Where did you get it from?

Mr. Gandhi.—From one of the London papers. May I read that? "It is easy to understand, however, that if the Swedish match industry is to retain its leading position, it cannot rely only on the Swedish factories, and for this reason the Swedish Match Company decided a few years ago to go in for a programme of taking interest in match factories abroad on a very large scale. We have now in operation two newly built factories in India, one in Bombay and one in Calcutta, and we are building two new ones, one in Karachi and one in Madras, and we have acquired two established match factories in Colombo and Rangoon. It is not our intention to try to monopolise the Indian match trade, and we have decided to seek the co-operation of prominent Indians in our Indian undertakings." We have also got an extract from an article which appeared in the "New Empire."

President.—What New Empire is this?

Mr. Gandhi.—It is a Calcutta evening paper.

President.—Is that recent?

Mr. Gandhi.—Yes.

President.—Have you got any more information regarding the Swedish Trust?

Mr. Gandhi.—This is all.

President.—What about the Japanese? Have you got any evidence as regards the operation of the Japanese manufacturers in Burma?

Mr. Gandhi.—I have no evidence to give you, but I was told when this subject was discussed that the Japanese exporters invoiced at less price than their home price by about a difference of 4 yen and in support of that statement, they produced some invoices and some letters, but I have no proof with me.

President.—We are trying to obtain this information from the importers.

Mr. Mathias.—Your objection to the alleged trust in the match manufacture I understand extends only in so far as the trust threatens the existence of the Indian manufacturers, is that not so?

Mr. Gandhi.—Yes.

Mr. Mathias.—What I mean is this that in some countries there are selling arrangements; for instance the various factories in the country may well retain their independence and come to some arrangements by which all their products are pooled and sold. Supposing any such system as that is introduced here, would your objection still hold good?

Mr. Gandhi.—I would request the Government's intervention. I would oppose this trust.

Mr. Mathias.—Then also you would ask for anti-trust legislation.

Mr. Gandhi.—Yes.

President.—Have you got any other proposals?

Mr. Gandhi.—I have several.

President.—What are they?

Mr. Gandhi.—I have to draw your attention to the fact that several provincial Governments, Bihar and Orissa, Bengal, Madras and United Provinces have taken some steps for the development of the match industry.

President.—We have written to all the local Governments and have received their replies so that it is not necessary for you to give evidence on that point.

Dr. Matthai.—What exactly is the kind of information you have?

Mr. Gandhi.—Only extracts from the reports of the Departments of Industries in those provinces. I would like to say in this connection that the Burma Government has up till now taken no steps in this direction. I would wish that all Governments should take some steps.

President.—Your information about the Government of Burma is not accurate. The Government of Burma had not done very much until recently, but they have made considerable progress towards the development of the Match Industry.

Mr. Gandhi.—I am glad they have taken steps, because the Burma forests are very large.

Dr. Matthai.—What do you wish the Burma Government to do?

Mr. Gandhi.—I want that royalty should be fixed at a reasonable figure. At present it varies from Rs. 4 to Rs. 12-8-0. I would put it at Rs. 6 or so.

President.—What is the next thing?

Mr. Gandhi.—Transport facilities should be afforded to the factories. Another thing I want to draw your attention to is about the railway freight.

President.—There is another committee functioning just now as regards railway rates and it would be better for you to approach that committee.

Mr. Gandhi.—We strongly hold that considerations of State revenue should not have precedence over those of the interests of the industry.

President.—You have mentioned that in your main representation.

Mr. Gandhi.—The term of the present protection should be fixed for at least 5 years in the first instance. After that period, an enquiry may be undertaken and the rate of duty may be revised in the light of circumstances then existing. But protection must continue till the industry is fully developed and is able to meet the total requirements of the country.

President.—That is the policy of the Government. If they want an industry to be protected, they fix a period.

Indian Match Manufacturers Association, Bombay.

Letter dated 29th December 1926.

I beg to send you herewith a representation on behalf of Indian Match Manufacturers Association (Bombay Presidency) for the consideration of the Indian Tariff Board. I also enclose herewith six spare copies of the same. My association will be glad to depute a representative or representatives to tender oral evidence before the Tariff Board whenever the Board desires. I shall feel obliged if you will please let me know when the Tariff Board is likely to visit Bombay and to hear evidence.

For your information I may state that the list of the Indian Match Manufacturing Companies on whose behalf I am forwarding this representation will be found on page 13 and the vested interest that have been created in these concerns are enormous and far more than the vested interest of Indians in this industry in any other Presidency.

I have received a letter from one of the largest Indian Match Manufacturing Company of Calcutta which I enclose herewith with a request that a note be taken that this company quite agrees with our representation and wishes to be put down as supporting the same.

Enclosure I.

Copy of D. O. letter, dated 28th December 1926, from the Esavi India Match Manufacturing Company, Calcutta, to Hooseinbhoi A. Lalljee, Esq., President, Indian Match Manufacturers Association (Bombay Presidency), Calcutta.

We have gone through the representation to be sent to the Tariff Board and quite agree with it. We shall thank you to include our name therein as one of the interested party.

Enclosure II.

From The President, Indian Match Manufacturers Association
(Bombay Presidency), Bombay, To The Tariff Board, Calcutta.

Representation dated 22nd December 1926.

With reference to the Resolution of the Government of India, Commerce Department No. 235-T. (14), dated the 2nd October 1926, referring to the Indian Tariff Board for investigation the question of granting protection to the Match Industry in India, I am authorised by my Association to submit on their behalf the following representation for the consideration of the Tariff Board.

The Government of India have instructed the Tariff Board to examine the whole position of the match industry with special reference to three points referred to in their said Resolution. The Resolution states that "The point of inquiry is whether the three conditions laid down in paragraph 97 of the Report of the Indian Fiscal Commission are satisfied in the case of match industry in India and whether the industry should be protected."

The Indian Fiscal Commission laid down the first condition to be that "the industry must be one possessing natural advantages such as an abundant supply of raw material, cheap power, a sufficient supply of labour or a large home market."

The chief raw material in the manufacture of matches is wood which is available in abundance in Burma as well as in India and if some of the factories have to rely upon imported wood it is because of lack of proper development of forest resources rather than to the absence of suitable wood in sufficient quantities. As for cheap power, the industry has not experienced any difficulty. The supply of labour required for this industry is more than what is required and with India it will never be a question of anxiety. It has for the present to rely, to some extent upon imported skilled technical labour but in few years' time this kind of labour will also be available in sufficient number. The third advantage which India possesses naturally is in extensive home market at hand.

The second condition laid down by the Indian Fiscal Commission is that "the industry must be one which without the help of protection either is not likely to develop at all or is not likely to develop so rapidly as is desired in the interest of the country." It was in 1922 that when the duty of Re. 1-8 was levied by the Government for revenue purposes, this high rate of duty served as a protective measure to the match industry and now it promises to develop if there is no unfair foreign competition.

The third condition laid down by the Fiscal Commission is that "industry must be one which will eventually be able to face world competition without protection." My Association confidently believe that the match industry if allowed to be developed on the lines suggested in this representation of theirs the industry will in a few years' time be able to face the world competition without any protection from the Government.

The Government of India in their Resolution under reference states in paragraph 2 that "if the Tariff Board decides that consideration must be paid to the industry brought into existence by the present rate of duty and that the duty should be maintained at the present figure or approximately at the present figure it will further report whether the loss in the customs revenue can be made up, in whole or in part by any other appropriate form of taxation on the industry." My Association have fully dealt with all these points in detail in this representation which they trust will receive serious consideration at the hands of the Tariff Board.

When the import duty of Re. 1-8 per gross was levied on matches some match-importers and dealers thought of starting this industry in India. As no European experts could be then had their attention was drawn towards Japanese. The Japanese who had by then realised their position at once agreed to come out to India as soon as they were invited and thus this industry was started in the first instance by the help of the expert Japanese.

In the beginning the splints and veneers were both imported from Japan and the only thing that was done this side of India was preparing the chemical mixture and dipping of the splints and filling and releasing the splints into and from frames and its packing, etc.

The Indian labour at first was rather nervous in joining match factories and therefore every inducement was given to them such as payment of daily fixed wages no responsibility whatsoever was fixed for the enormous quantity of wastage which they made owing to the fact that they were quite inexperienced and further they were guaranteed continuity of employment for several months; these facilities encouraged them and at present they are pleased to work in match factories. It also took some time for Indian intelligent workers to learn the mixing of chemicals and working of splints-frame-machines for filling and releasing the same and by now it may be taken that so far this simple splint-frame machinery working is concerned they have acquired a very fair knowledge of it but as regards the mixing of chemicals they have not yet become so very expert as the Japanese and it is hoped they will not take long to pick up the knowledge of the same in a short time.

On the Government levying the duty on veneers and splints these factories imported further wood-cutting machinery and started manufacturing splints and veneers from the logs which they began importing. They also began

employing a large number of village women for pasting veneers as is done in Japan and at present hundreds of village women are doing this work in the factory as also at their homes during their leisure hours. A factory employs about 6 to 8 hundred persons.

There would have been no need of importing logs, but it is a well-known fact that upto now no suitable wood has been found for manufacturing splints in India. The factory owners in their own interests have been doing their best to find out wood but upto now they have been successful in finding out wood suitable for veneers which is about 50 per cent. of their total requirements.

It must also be noted that it is very essential that wood for splints ought to be as white in colour as the imported logs because it is an established fact that if these splints are either dark or coloured the consumers do not touch it. It is this fact that has upto now not made the old existing pre-war match factories a paying concern. The foreign competition is so keen that a slight difference in quality which apparently signifies inferiority in any way is sufficient to stop the sale of Indian produce. Therefore so long as wood of the quality for splints is not made available any duty on its import is bound to affect seriously this new promising industry which not only at present supplies work for hundreds of poor persons in many villages but promises to supply work to thousands in every district in India and supplies a most needed article of every day use, and being a bare necessity.

It has been said that Japanese Government has been doing their best to see that as much less of automatic machinery as is possible be made use of so long as the cost does not go up in any appreciable extent in order that employment be made available to people specially to those in the villages and we have been following the same principle and which we trust our Government will also like to encourage.

We believe that if Government make careful research, wood for splints would be available in India and it is for the Government in the interest of the industry and the forest revenue to do their best to find out such white wood as is required for the manufacture of splints and further to arrange for cheap railway freight as the cost of carriage is the chief factor but until that is done the import of logs must not be handicapped in any way. The Indian manufacturer wants to be independent of foreign logs and therefore he is very anxious that the Government should take up the research work in all seriousness in the interest of the people as also for the purpose of increasing the revenue of forest.

The wood in Northern part of India may be considered suitable for matches but the railway freight at the outset is prohibitive and secondly no move has been made by Government of this presidency for making any investigation for match-wood, as has been done by Bengal Government, who have appointed Mr. Ghose and full report is to hand, and consequently Bengal is decidedly in a better position to use indigenous timber of India than what this presidency is.

The match industry in India is in a great danger owing to foreign competition and the opening of match factories in India by foreigners is like a hanging sword on the heads of Indian population in general and the factories in particular.

There is a powerful syndicate in Europe known as the Svenska Trust mainly controlled by Swedish and Americans whose only aim is to control the match production of the world and to sell their own made matches at a heavy profit where there is no competition. They succeeded in driving out the Japanese competition in India by dumping sales with the result that they were able to starve a large number of Japanese factories and finally taking over some of these works and thus eliminating Japanese competition for ever from India.

They have taken over several factories in Japan the output of which amount to about 50 per cent. of the total output of Japan and therefore it is

believed that a special bill has been introduced in the Japanese Diet prohibiting the imports of foreign capital for industrial concerns of Japanese origin. Even in Japan this foreign Syndicate may not capture their whole trade and thus ultimately make Japan pay heavy prices and be dependent on foreign produce.

This Trust has also started purchasing factories in India and have systematically started reducing the prices of matches manufactured by their works so that the various other works which they have not been able to capture up till now may be forced to be closed down or be sold to them. It is noteworthy that they make no secret of this their policy and one and all works have by now directly or indirectly being approached by them or their agents and clearly told that if it is not sold to them they will soon find that they will have to stop their works. We cannot help saying that we feel that it is only in India that a foreign syndicate can boldly do such things.

They started a match factory at Ambarnath near Bombay under the name and style of Messrs. Western India Match Manufacturing Co., Ltd. with no Indian capital; and in September 1924 they first produced the stuff and sold it at Rs. 2 per gross. They were since then as has been their policy reducing the prices and at present they are selling at Re. 1-5 and Re. 1-6 per gross in the open market while to certain constituents they have been giving private rebates and the prices at which they are actually being sold to them is about Re. 1-4 per gross. Their aim is to undersell and thus make all the Indian factories lose heavily. They have a very large capital and with an object of capturing the world's match trade it is no surprise that they are following these tactics. It is well-known fact that it is their principle not to sell their produce made in India for any port or town where Swedish foreign matches are being sold. They only sell and under-sell where Indian manufacture is finding a market. Attempts have been made to bind over Indian concerns to sell at certain rates and in certain parts only. These facts clearly establish the case that they are here for the promotion of foreign Swedish match industry.

The activities of this Trust are well and fully defined in an article appearing in "Trade Review" for Asia extracts from which are given below:—

TRADE REVIEW FOR ASIA

for promoting Asia's industrial development and foreign trade relations.

THE FOREIGN DANGER TO INDIA'S MATCH INDUSTRY.

The time is rapidly ceasing to be when India was solely a supplier of raw materials to foreign countries and buyer of manufactured articles. The country is being industrialised, and foreign capitalists, whose only Fatherland is the land which provides the best opportunities for lucrative investment, are not slow in casting their greedy eyes upon the unexplored resources and cheap labour of the Indian continent. The problem has now become extremely acute and Indian opinion is rightly concerned about the alarming growth of foreign private and joint stock companies which not only cause a large drain of India's wealth in the form of interests and dividends but what is more serious, tend to transfer the key-industries of India into foreign hands as well as to prevent the growth or prosperity of a number of industries in which India could be self-dependent and self-supporting.

To this latter category belongs the match industry. It was long believed that Indian match industry was doomed to failure for want of suitable timbers. But during the last few years it has been clearly proved that this is a fiction. India is one of the largest markets in the world for the consumption of matches and she is obliged to import enormous quantities from foreign countries. The most important of those is Sweden; the import from Australia, Hungary, Japan, Norway, Czecho-Slovakia or Finland is inconsiderable in comparison with Sweden. That country has, therefore, a very strong interest in preventing the growth of the match industry in India, for

it would be a severe blow to Sweden's largest export trade if India should succeed in manufacturing matches on a sufficiently large scale to satisfy the demands of the Indian market.

The Swedes have, therefore, decided to start their own factories in India a fact that has already aroused considerable indignation in national Indian circles. But the exact manoeuvres of Swedes still seem to be not clearly understood by the large majority of Indians and it will therefore be very instructive to them to read the following facts that have been placed at our disposal by a German match expert who has recently returned from India after many years' stay there who has set up match factories for a number of Indian capitalists and who is sincerely and enthusiastically interested in the development of match industry in India. He says: "It is well-known that India is to-day the best customer for Swedish matches. This is solely due to India being unable to produce her own matches. And this again was and is still due to lack of enterprise and difficulties in obtaining timbers suitable for match manufacture. Lately however things have considerably improved. Since over two years the Indian match manufacturers have been protected by an import duty of Re. 1-8 per gross of boxes of matches. As the cost price of good matches made in India is somewhat below Re. 1-8 per gross it is obvious that a good return for the capital outlay is assured and there is no doubt a fair opening for match industry in India. In fact some of the Indian business men are at present very keen on starting match factories in India and lately some well equipped factories have been started. It is almost certain that in course of time India will be able to produce her own matches and then the import of foreign matches chiefly of Swedish make will stop automatically. Sweden or to be quite correct the Swedish American match combined is watching this development with keen interest. They have already launched an offensive against the Indian Match Industry on a large scale. They did this in such a cunning way that most of the Indians have been taken unawares. It is worth while to go a little further into the practice of the said Combine. Above all one thing is certain; the real aim of the said Match Trust is to monopolise the world's match trade. The means employed by the Trust to attain this aim are numerous. According to circumstances they employ fair or foul means. To be just it must be admitted that they employ fair means first. If unsuccessful they will use foul means unscrupulously. It is impossible within the available space in this paper to depict the various ways and means employed by the Trust. Generally the practice employed is as follows: After having undersold the matches manufactured in the country for a considerable time (the English call this dumping) they approach the factories with a proposal to buy the whole business. As a rule the price offered is a decent one. Of course the owner will be bound over not to do any more business in matches. Very often after having bought the factory it will be closed down. Then of course the import of matches must commence again. Quite a number of match factories in Europe and elsewhere have come under the influence of the Trust and a great number have been bought by the Trust.

What means is the Trust now employing in India? Before it must be perfectly understood that the Trust is out for killing the existing match factories in India in order to obtain their real aim that is to govern the world's match trade. To attain this aim this Trust has started a factory at Ambernath near Bombay and another in Calcutta. Both these factories are already working and an extensive underselling of Indian made matches has already begun. In addition factories at Karachi and Madras are in course of construction. Moreover two existing factories one in Colombo and the other in Rangoon have been bought by the Trust. Further some of the important factories in India have received very favourable offers, fortunately so far without success. They have also opened the Match Manufacturing Supply Company in Bombay. This Company besides supplying paper and chemicals for match manufacture (most of Swedish make) is acting as agent for Messrs. Gerh. Arehm, Stockholm. The last named firm is supplying match making machinery but lost its independence some time ago or in other

words it belongs to Trust. The said supply Company comes as a wolf in sheep's clothing to the Indian business man. They offer materials cheaper than any continental or English firm. Indeed this Company undertakes to equip factories almost for nothing. They offer to take payments after years. Why? Any man with a reasonable amount of business brain will feel sure that there must be a 'fly in the ointment' somewhere or as the Indians say "Kuchh dal men kala kala hai." And so there is. If, for some reason or other, the payment is not forthcoming after the agreed period the Trust will take over this factory without much ado and thereby strengthen its position in India more and more. Most of the readers of this paper will say there will be comparatively few Indians who will go into this trap. This is not so. It may be mentioned here that lately the Government of Bihar and Orissa has been trapped in the aforesaid way. There in Patna the Swedish American Match Combine is erecting a small demonstration factory on behalf of the Government. By allowing that the Government of Bihar and Orissa has assisted the Swedish Match Trust and has acted against the interest of the country and people. It must be mentioned here however that the Government did not know at the time that the Match Manufacturing Supply Company and the Swedish American Match Combine are identical. Unfortunately only a few Indians are acquainted with this fact.

During the last year a few big factories have been started near Bombay by enterprising Indians. These factories import suitable wood in logs from Siberia. Their matches are finding a ready sale. The Swedish factories in Ambarnath and Calcutta import wood in logs also. There is no import duty on wood in logs. Now the Trust is feeling the competition of these factories and in order to get rid of them they urged the Government to put a high duty on wood in logs also. They did not do this in a straightforward way but got behind some officials and other influential people. Fortunately the Bombay business men are wideawake and the attempt of the Trust failed. If they had succeeded the Indian factories besides the Swedish factory near Bombay would have had to close down. As the mentioned Indian factories are considerably larger than the Swedish factory this would only mean that the Trust is getting nearer its real aim that is to govern the world's match trade. The last mentioned move of the Trust was a very clever one and quite a number of Indians were unable to see the real object of the Trust. The Trust is keeping up its propaganda regardless of the expenses.

It will be of interest to mention a few items about the Trust. The capital of the Combine is 180 million Swedish Kronen (about 15 crores Rs.). On the board of directors are names like Percy A. Rockefeller, Samuel F. Pryor, H. Havenmeyer, John McIlugh of the Mechanical-Metal-National Bank, F. L. Higginson of the Bank Lee Higginson & Co., New York. Chairman is the Swede, Ivar Krouger.

There is no doubt that, if the Trust is able to monopolise the World's Match Trade the consumer will have to suffer. Because after attaining their aim, they will fix the price at such a level that they will more than recover their former expenditure. Moreover, it is of no interest to Indians if their industries are organised solely, with foreign capital.

Let us hope that India will be among the countries where the Trust is unable to secure a footing.

Now this same Mr. Kreuger, the director of the Swedish Match Company has been clever enough to publish a review of the World's Match Industry with the special object of throwing sand into the eyes of the Indian people. After showing how Sweden has been able to overcome the difficulties caused by the War and to compete successfully in the world's market, he says:

"It is easy to understand however that if the Swedish match industry is to retain its leading position it cannot rely only on the Swedish factories and for this reason the Swedish Match Company decided a few years ago to go in for a programme of taking an interest in match factories abroad on a very large scale. We have now in operation newly built factories in India,

one in Bombay and one in Calcutta, and we are building two new ones, one in Karachi and one in Madras, and we have acquired to establish match factories in Colombo and Rangoon. It is not our intention to try to monopolise the Indian match trade and we have decided to seek the co-operation of prominent Indians in our Indian undertakings."

The facts stated above are almost correct and although it may seem that some machinery manufacturers of Germany have published these facts in order to get machinery orders which by the way may be the object of the writer but the facts written about the activities of this Trust and the manner in which they have been carrying on their work in India and the ultimate objective stated therein are so far as the Indian match industry is concerned quite clearly stated and therefore we are not repeating again all these facts and objects but have given a substance of it so far it concerns us for very careful and serious consideration. We wish to add further the following facts which will implicitly prove that this Syndicate is so seriously out to capture this trade that they are not only going to dump and undersell but they are going to use their financial powers in attempting to capture all the manufacturers of chemicals and machinery and thus entirely paralysing the match industry in India.

At present they are controlling important works of Chlorate of Potash. The Chlorate of Potash industry was with France and now in post-war times it has also been established in Germany. There is a Syndicate formed by which all the French and German manufacturers have joined hands for selling purpose and according to our report this syndicate is controlling the sale of Chlorate of Potash.

Another important ingredient for manufacturing matches is Amorphous Phosphorus which has practically the only use in matches. This article is also in a trust and it is said that the Svenska Trust are controlling the same. All the important manufacturers such as Messrs. Albright and Wilsons of England are in the trust and there is only one factory which is out of trust. This factory has been likewise asked to join the trust but since it has running orders from India it has not joined the trust as yet. This being the case the different factories in India are approached by the Svenska Trust and inducements have been put forth in their way to give a running business to their own concern the Messrs. Match Manufacturing Supply Co., Ltd., so that the factory which is not now in the syndicate may be starved out and be forced thereby to join the trust.

Thus their motive is clear; they may supply for the time being different works with the stuff of Amorphous Phosphorus and after taking over the only factory which is out of the Syndicate they may as well starve the local (Indian) factories and as this article has practically the only use in matches the factories have either to close down or join the trust on their own terms and dictation.

It will be interesting at this stage to recall as to how this Trust forced the Japan Match and Chemical Factories to join it. Some time back a representative of the Diamond Match Co. of America which is controlled by a certain financial magnet went to Japan and carried on discussion with Japan Match Manufacturers to join the Syndicate. The Japanese works wanted to have their own terms of business because the factories had enough orders from India then and the negotiations did not result into any success. This Diamond Match Co. of America are joined in Swedish concern and have formed into Svenska Trust.

Since the Japanese works did not join the Trust therefore the root of their orders which was India was caught and as Indian business was only done on indents they began bringing consignments on their own accounts and began dumping sales with the direct result that by underselling Japanese works which began to starve owing to demand falling off from the Indian market with the ultimate result that some of them had to join the Trust. To-day three important companies of Messrs. Nippon Match Co., Inoaye

Match Co. and the Kobayashi Match Co. are gone into the Trust. Thus their aim was to starve the works and backed by huge finance and heavy financial resources they are practically in a position to command.

There was one Amorphous Phosphorus Factory in Japan which they have bought over and at the outset they stopped exports to India and sold only to the match manufacturer in Japan. But Japanese factories soon found out that their ultimate objective was to starve their works without this important chemical and that is why they started another factory with Mr Takigawa at the head and have started making their own Phosphorus and consequently the Trust could not succeed in taking up the other factory and starve the remainder of the factories. It is also interesting to re-call the further activities of this Trust as are now carried on in Europe and they are as under:—

The Trust is now arranging to take over the match monopoly supply of French Government as per article appearing in August 1926 issue of European Finance page 187 extract of which is as under and which we submit requires a very careful and serious consideration as to how powerful the syndicate is and for what they are clearly out.

EUROPEAN FINANCE

London, August 25, 1926. Page 187.

The Swedish Match Trust has put proposals before the French Government for taking over of the French Match monopoly. The French Government is stated to look favourably upon this offer, inasmuch as the Swedish Match Trust is willing to pay a lump sum down in respect of the concession immediately upon signing the agreement instead of making of annual payments. The Swedish Match Trust is also endeavouring to obtain the match monopoly in Czecho-Slovakia. The Trust was founded by Mr. Ivar Kreuger, who succeeded at the end of the late war in uniting all the Swedish Match Factories in one combine. Endeavours were then made to enlarge the scope of the combine by converting into an international Trust, and the necessary capital for this purpose was obtained from American financiers. In 1923 the sister undertaking of the Svenska Tandsticks A. B. (Swedish Match Co.), the International Match Corporation was established and soon became the focus of the world's Match business. At present it is not so much the quality of the matches produced by the Trust as the enormous capital it commands that give it a leading position amongst the world's most important undertakings. It is estimated that the capital of the Trust amounts to about Kr. 800,000,000. Armed with powerful weapon conferred by its huge capital the combine has succeeded in securing control over half the total match production of the world. In its annual report the Trust stated that the undertaking possesses some 150 factories the estimated value of which is about Kr. 270,000,000. In these factories over 50,000 hands are employed.

Their next move is to take up Messrs. Plasma United Match Manufacturing Co., Ltd. of Czecho-Slovakia known as Solo and Helios Works and also Nitedale Works of Norway and they have therefore tied down important dealers who are selling their own goods prohibiting them from importing matches of these factories and the direct result is that Messrs. Nitedals have now joined the Trust and it will not be a wonder if Messrs. Plasma United also join them hereafter.

Further they have been negotiating with the Russian Government for a monopoly for taking over the timber for Japan and India and have actually made offer but they have not succeeded so far.

Endeavours have also been made according to our report to monopolise frame sticks and other articles from Japan as well.

It is therefore the only aim of this concern of the Trust is to see that no other factories can exist outside the Trust and with this motive in view

they are working. We therefore specially require protection against this foreign Trust of such a nature.

This Svenska Trust is also controlling various manufactures of match machines and have captured some Swedish and German Works and further according to our report other important German Works have also been captured by them.

This Svenska Trust have started a couple of factories for manufacturing matches in other parts of India like Bombay and have also bought one existing factory in Rangoon which are worked entirely by automatic machinery and no Indian capital is invested therein nor do the Indian labourers get enough employment up till now in them and it is their objection to reduce as much Indian labour as possible; while on the other hand the Indian Match Factories are utilising as much manual labour as possible thereby giving employment to several thousands Indian labourers although by doing so their cost of production comes to about 4 annas more gross and they have to sell at cheaper rates than those of the Syndicate because the finish of their produce is not exactly like that of the machine-made goods thus the Indian factories are further handicapped in this respect as well.

Indian factories therefore should be given adequate protection against the foreign Syndicate which employs a limited number of labourers and in which hardly any Indian or even a Britisher is employed on a responsible post.

From the table of prices herein annexed it can be seen as to how this Syndicate has been systematically reducing the prices to achieve their object and thereby forcing the Indian factories to lower their prices of their own production.

At present by reduction in the rates this important industry in its very infancy has come into a perilous condition and is threatened with total extinction in a very short time to the great detriment of the people of this country specially the village workers and we hope that it will not go down in history that a national industry of a necessity of life which came into existence was nipped in bud by foreigners and that Government were not able to protect it.

Match Chemicals.—Indian factories have to depend for the following ingredients and chemicals for their requirements.

They are as under :—

FROM EUROPE

Chlorate of Potash.
Amorphous Phosphorus.
Sesqui Sulphide Phosphorus.
Glue.
Paper.
Zinc Sheets.
Aspen Timber.
Other Chemicals.

FROM JAPAN

Russian Timber.
Glue.
Some Chemicals.

India at present provides all the labour required and a good deal of wood. She is dependent on foreign countries for articles stated above which she has to import by paying a duty of 15 per cent, and the machinery and the other parts thereof are also imported on which also a duty has to be paid.

As already pointed out this industry requires at present some foreign ingredients and principally articles like Amorphous Phosphorus, Chlorate of Potash and Zinc sheets. These have practically the only use in a manufacture of matches and factories which produce these chemicals and which are

outside the Trust are attempted to be starved into submission or are required to sell their produce to the Syndicate only, or if they wish to exist they must join the Trust. The main object of the Trust is to under-quote and under-sell even these articles in India with the ultimate result that they alone having a world-wide organisation can maintain and have free field since in case they undergo any loss in India the same is recouped in different parts of the world and thus ultimately they alone can remain in the field as match manufacturers, matches machinery makers, proprietor of works producing chemicals essentially required for match manufacture.

Duty.—Government have stated that the duty they have levied was purely from a financial point of view and when the expected duty is not realised they have put forth the matter in the hands of the Tariff Board, but they have not considered the point that although the duty apparently has decreased in reality the Government is not a great loser by having brought in a much needed industry into existence and further some of the foreign materials which are used in the manufacture of matches such as:—Chlorate of Potash, Amorphous Phosphorus, other chemicals, Glue, Timber, Paper, and Zinc sheets, being not made in India and also the machinery used for match making and the parts thereof, these are all imported from abroad and custom duty is paid on the same at 15 per cent., even starch which is required for pasting the match boxes is made from Dutch farina which is imported by some factories from Holland and there are so many items that taking collectively on these materials Government can barely be considered as a loser since it is dead certain that all these articles were never imported before in such big lots and their imports have increased because of the opening of these match factories in India.

Secondly the income tax and other incidental taxes which Government will be getting from the factory owners and their employees can be attributed to only the fact that these match factories have been started in India.

Thirdly if Government is losing heavily on duty it is because of the transshipment of matches to native ports in India and specially the Native States since the duty charged by the Native States is not paid to the British Government directly.

Fourthly at present hardly one-third of the total consumption of matches in India is manufactured in India and the duty on the chemicals and raw materials required for the produce of this quantity is paid to Government. Therefore if the Government revenue has gone down a great deal it is probably due to the fact that a large portion of the remaining two-third consumption which is as a matter of fact imported into India finds its way into India without paying the duty at Rs. 1-8 per gross and therefore we believe that it is in this direction that the Government should cause an inquiry to be made if there is a great deficit in revenue.

Transshipment.—The duty which the Government is losing is on consignments which are transhipped from Bombay, Karachi, and other ports.

One of the reasons for a deficit in the customs duty can be attributed to the cause of transshipment which has been according to our information somewhat abused. It is said that from the year 1922 to 1924 the various consignments of matches have been transhipped from Colombo to Cutch and other states where only $7\frac{1}{2}$ per cent. duty is charged and from there the goods were going *viâ* inland to various railway stations of Kathiawad and to the whole of Kathiawad, Gujarat and as far as Berar but this has been stopped to a great extent recently.

It is also said that for Jamnagar and specially for Bedi Bunder the goods in a large quantity are going transhipped from Bombay, Karachi, and Colombo which can be ascertained from the figures inquired at proper sources where apparently the duty at Re. 1-8 per gross is charged but it is doubted by some whether it is in reality a fact.

In the same way there is a port Navlakhia in Morvi State where also large consignments of goods are going for transshipment and it is said and

believed that matters are also managed there in the same way as they are at Bedi Bunder.

This doubt commands more serious thought and consideration from the further facts that the goods which are bought from Bombay dealers for transhipment to these places are purchased at about Re. 0-15-0 per gross and it costs annas 3 more per gross including the reasonable profit of anna 1 per gross and if the duty of Re. 1-8 is added it will actually cost at Rs. 2-10 per gross whereas the goods are being sold at price of Rs. 2 to Rs. 2-1 per gross throughout the whole of Kathiawad and Gujarath; the matches made in Sweden and Czecho-Slovakia are supplied to these parts, *via* Bedi Bunder.

Even at important places like Ahmedabad and Bhavnagar the goods from Bedi Bunder are sold and are said to be saleable at favourable prices than those sent from Bombay. Bhavnagar State has also the same transhipment rights but the goods are not imported there because it is said full duty is charged there.

There is one port known as Bangrole in Kathiawad where also the goods from Sweden sent on transhipment are welcomed while the goods of foreign origin on which the actual duty has been paid in British India or the goods made in British India are subject to a duty of 50 per cent. so that the buyers have to perforce purchase transhipped matches of foreign make.

At Verawal a similar state of things exists but there the duty varies from 35 to 50 per cent. levied specially on matches sent from Bombay duty paid or if they are Indian made.

At Porbunder the duty on Indian matches or on matches on which the duty has been paid in Bombay, the duty charged is annas 12 per gross, in other words the merchants are forced to bring the transhipped matches in this port also.

At Jamnagar (Bedi Bunder) and Navlakhia (Morvi State) Swedish and other foreign matches are sold at only couple of annas higher than the Indian made matches and consequently Indian made matches cannot be sold in these places.

If foreign matches for which the duty has been paid in Native States are not subject to any duty in British India while the goods manufactured in British India or foreign goods for which the duty has been paid in Bombay (British India) is subject to heavy surtax and duty as stated above. It is quite clear therefore that while on the one hand Government will be losing duty, the Indian industry on the other hand will also be handicapped with surtax and duty and the foreign goods will be more and more imported there.

From the above stated various points it could be seen that the foreign matches which are coming in large quantities give no duty to British Government and this may be attributed to the abuse of transhipment rights only and the remedy is that the transhipment of the goods should only be allowed in such quantities as are actually required for the actual consumption of the States where it is transhipped.

It is also said that Jamnagar State has made an annual contract of 3,000 cases of Swedish matches to be brought by transhipment from Colombo if so then the Government cannot get duty thereof nor could they have any knowledge of it.

All the above facts about native ports and Native States are stated from reports which the merchants have been circulating but it is for the Government to make due inquiries and find out how much truth there is in any of these statements. If an inquiry is made as to what is the real consumption of the different Native States and what have been their imports directly or indirectly, we believe the true facts will be out and the Government can then do what they may deem necessary to protect the losses in duty if there is a loss to them on comparison that still only one-third of the total consump-

tion of India is produced in the country while two-third is being imported from foreign country.

From what has been stated above it will convince the Tariff Board that the match industry fulfils all the conditions laid down by the Indian Fiscal Commission and is therefore fully entitled to be protected. With this end in view it is strongly urged that the following steps should be taken to allow the new industry to be developed along right lines :—

1. That the present import duty of Re. 1-8 per gross should be declared as protective duty and should be maintained at the same rate as this industry if allowed to be developed on right lines will soon be in a position to get over technical difficulties and as the industry provides employment to thousands of labourers.
2. That special protection should be given against the foreign competition of the Syndicate which is not a *bona fide* concern and whose activities should not be allowed to be successful. It is therefore suggested that a discriminating excise duty on the product of the factories financed wholly or mainly by foreign capital should be levied but under no circumstances any burden should be imposed on the factories run purely by Indian capital and Indian enterprise.
3. That proper control should be exercised on the imports of foreign matches into Native States by transshipment methods which are likely to be resulted into a deficit in the custom duties by the transshipment right being abused.
4. That handicaps in the shape of extraordinary duties levied by Native States upon matches manufactured in British India should be removed.
5. That suitable wood which we believe exists in abundance in Indian forests and which is the chief raw material in the manufactures of matches must be made available to the match manufacturers by the Government taking up the research work in all seriousness and by affording every facility for its transport by cheap railway and steamer freight.
6. That in course of time if proper encouragement is given by the Government, it is believed that even the chemicals and paper required in the manufacture of matches will be available in India and the match industry will be in a position to cope with the full demand of the country in a few years' time so it should be allowed to be developed on right lines, and the industry be treated as a National Industry as it supplies an every day's necessity of life.

The List of Indian Match Manufacturing Factories in Bombay Presidency :—

1. Andhery Match Factory.
2. Santa Cruz Match Works
3. Bombay Match Works.
4. Swadeshi Match Factory.
5. National Match Works.
6. Asada Matches Factory.
7. Borivli Match Works.
8. Titwalla Match Factory.
9. Deccan Match Factory.
10. Belgaum Match Factory.
11. Husein Match Factory.

12. Sultan Match Factory.
13. Guzerat Match Factory.
14. Thana Match Factory.

Rates at which factories sold their stuff to wholesale dealers in Bombay :—

Per gross.

NOVEMBER 1923.

Indian made matches at . . . Rs. 2-1-0.

APRIL 1924.

Santa Cruz, Andhery & Ors. Re. 1-11-6 to Re. 1-12-0.

NOVEMBER 1924.

Swedish Syndicate (Western India). Rs. 2.

Indian Re. 1-11-6 to Re. 1-12-0.

MAY 1925.

Swedish Syndicate (Western India). Re. 1-14-0.

Indian Re. 1-11-6 to Re. 1-12-0.

August 1925.

Swedish Syndicate (Western India). Re. 1-13-0.

Indian Re. 1-11-6 to Re. 1-12-0.

OCTOBER 1925.

Swedish Syndicate (Western India). Re. 1-13-0.

Indian Re. 1-11-6 to Re. 1-12-0.

APRIL 1926.

Swedish Syndicate (Western India). Re. 1-10-6.

Indian Re. 1-8-6 to Re. 1-9-0.

AUGUST 1926.

Swedish Syndicate (Western India). Re. 1-8-0.

Indian Re. 1-5-6 to Re. 1-6-0.

NOVEMBER 1926.

Swedish Syndicate (Western India). Re. 1-6-6.

Inducement and rebates given by Swedish Syndicate. Lot of 25 cases Re. 1-6-0.

„ 50 „ Re. 1-5-6.

„ 100 „ Re. 1-5-0.

Indian Re. 1-2-0 to Re. 1-5-0.

INDIAN MATCH MANUFACTURERS' ASSOCIATION, BOMBAY.

Oral Evidence of Messrs. R. M. FATEH ALLY, H. S. MUHAMMAD and MULHERKAR recorded at Bombay on Wednesday, the 7th December, 1927.

Introductory.

President.—Gentlemen, you are all appearing for the Indian Match Manufacturers' Association, Bombay Presidency?

Mr. Fateh Ally.—Yes.

President.—Mr. Fateh Ally, you are interested directly in the manufacture of matches.

Mr. Fateh Ally.—Yes.

President.—Mr. Muhammad, you are also interested in the manufacture of matches, are you not?

Mr. Muhammad.—Yes.

President.—You are also an importer.

Mr. Muhammad.—I was.

President.—You don't import any more.

Mr. Muhammad.—There are no imports now.

Dr. Matthai.—You are also interested as a dealer, are you not?

Mr. Muhammad.—My other partners Messrs. Abdulali Ebrahim are interested as dealers.

President.—And you Mr. Mulherkar?

Mr. Mulherkar.—I am the Secretary of the Association.

President.—Who is the President?

Mr. Mulherkar.—Mr. Hooseinbhoy A. Laljee.

President.—I suppose he is coming to give evidence on behalf of some other Association.

Mr. Mulherkar.—Yes, on behalf of the Indian Merchants' Chamber.

President. It is rather unfortunate that the same witnesses should come forward in different capacities.

Mr. Fateh Ally.—The Match Manufacturers' Association being composed of manufacturers can only represent people who have already been here.

President.—It is odd that same witnesses should represent two or three different bodies.

Dr. Matthai.—Mr. Mulherkar, you are not interested as a manufacturer.

Mr. Mulherkar.—No, I am merely a servant of the Association.

President.—Are you in any way connected with the Match Manufacturers' Association, Calcutta?

Mr. Mulherkar.—Not at all. That is a provincial body as far as Bengal is concerned and ours is also a provincial body for the Bombay Presidency.

President.—When was this Association started?

Mr. Mulherkar.—In September, 1926.

President.—Is it a registered body?

Mr. Mulherkar.—No, it is not.

Object of the Association.

President.—What are its functions? What are its principal objects?

Mr. Fateh Ally.—The objects are to defend the interests of the match manufacturers. This Association first came into being when the duty was levied on splints and boxes.

President.—I think you sent some telegram or something to the Government of India about the levying of duty on splints and boxes?

Mr. Fateh Ally.—At that time there was no Association. It was only after that the Association came into being. The telegram referred to by you was sent by us in connection with the Bombay Match Works and one other concern. Then, the other people who were not so well stocked with splints and veneers kicked up a row and said that it was not really necessary to have this duty. And then we formed this Association.

President.—Besides defending itself against Government measures or any other action, does it do anything to organise the business such as the regulation of output, the regulation of prices or anything like that?

Mr. Fateh Ally.—Attempts were made but they came to nothing.

President.—What sort of attempts were made?

Mr. Fateh Ally.—Attempts were made to have a fixed selling price for the first quality; a fixed selling price for the second quality and so on; and then the industry being in itself nascent and at that time there being a very large profit in the sale of matches, it was thought that this might be left to adjust itself.

President.—Have these factors adjusted themselves now?

Mr. Fateh Ally.—Now I think we have come to a situation in which there is no room for further price cutting.

President.—Has not the time come for stabilising prices?

Mr. Fateh Ally.—I say that prices are now at a level which will be maintained, unless somebody starts a price war, unless the Ambarnath people go into the market and start selling, say, at 14 or 12 annas.

Dr. Matthai.—Does your Association include all the manufacturers except Ambarnath in the Bombay Presidency?

Mr. Mulherkar.—Yes.

President.—Did you ask Ambarnath to join?

Mr. Fateh Ally.—We did not. Ours is an Association of Indian Match Manufacturers.

Mr. Mathias.—Is the Gujarat Islam Match Manufacturing Company a member of your Association?

Mr. Mulherkar.—Yes.

Dr. Matthai.—When you generally make a representation relating to any Government measures, do you try to get the support of the Indian Match Manufacturers' Association in Calcutta? Generally is there any consultation between the two Associations?

Mr. Mulherkar.—There was consultation only when the resolution of the Government of India in the Commerce Department regarding the appointment of the Tariff Board was announced and not before that.

Dr. Matthai.—Do you mean regarding this particular reference?

Mr. Mulherkar.—Yes.

Dr. Matthai.—I find in your representation here you include a letter from the Esavi India Match Manufacturing Company which seems to indicate that as far as this representation is concerned you have got the support only of one factory in Calcutta. You have not got the support of the whole association in Calcutta, have you?

Mr. Mulherkar.—We only approached them when there was a conference of all the match manufacturers of India held at Calcutta in 1926.

Dr. Matthai.—Do you mean in connection with the industrial congress?

Mr. Mulherkar.—Before that there was a conference held by the Bengal Match Manufacturers' Association. At that conference, the Association's representative was present and there was some concerted action settled upon. Before that we did not have any mutual consultation.

Mr. Mathias.—On page 13 of your representation you give a list of Indian match manufacturing factories in the Bombay Presidency. Are these all members of your association?

Mr. Fateh Ally.—The Asada Matches Factory has I think been removed to Verawal.

Mr. Mulherkar.—The Deccan Match Factory is in voluntary liquidation.

Mr. Mathias.—The Borivli Match Factory is financed by Japanese capital, is it not?

Mr. Fateh Ally.—When this company was started, at least half the capital was Indian. Since then, there was some disagreement between the Japanese and the Indian capital.

Mr. Mathias.—Is that factory still a member of your Association?

Mr. Fateh Ally.—Yes. It has paid the subscription for the whole year. The Japanese partner in that factory is simply a working partner. He came with the machinery to teach the Indian workmen.

Mr. Mathias.—And the Titvala Match Company is also partly financed by Japanese capital?

Mr. Fateh Ally.—That is financed by Indian capital.

Mr. Mathias.—If you have the Borivli Match Works which is of foreign origin as a member, is there any particular reason why the Western India Match Company was not asked to join?

Mr. Fateh Ally.—The only reason was that we never for a minute contemplated that they would accept, for their object was from the start to get us out of the business.

President.—It is a well known thing about the Swedish Match Company that if possible they always tried to conciliate the local industries.

Mr. Fateh Ally.—They say "give us 51 per cent. interest in your business; if you don't agree, all right, we will see that you get out of it".

President.—They can obtain 51 per cent. interest without necessarily having 51 per cent. control in each factory. What they aim at is 51 per cent. Supposing there are 14 factories here, they may buy out 7 and leave the remaining seven alone. These seven factories *plus* their own may give them 51 per cent. interest in the industry as a whole. That is the way they work and not 51 per cent. interest in all the factories.

Mr. Fateh Ally.—That would not help them as far as our factory is concerned. Their idea was to get control, so that they may be able to regulate prices afterwards.

President.—They can regulate prices by having say a dominant interest in the whole industry as such and not necessarily in every unit. There is a distinction as you can see. That is how they operate in other countries.

Mr. Fateh Ally.—The conversation with Mr. Bierman having taken place before the formation of the Association, we never thought of asking them to join us. We thought that they would be hostile to us.

President.—They may simply buy out some of the factories and then join the remaining Indian manufacturers and in that way they may obtain a controlling interest in the whole industry. You never came to that stage of negotiation with them.

Mr. Fateh Ally.—No.

President.—There are some factories in the list of your members of which we know nothing. For instance, take the case of the Deccan Match Works.

Mr. Mulherkar.—It is in voluntary liquidation.

President.—Where is it?

Mr. Mulherkar.—It is in the Sholapur District.

President.—It is a small factory.

Mr. Mulherkar.—Yes.

President.—What about the Belgaum Match factory?

Mr. Mulherkar.—The proprietor of that factory died a year ago.

President.—Does it do any business?

Mr. Mulherkar.—No, the factory is not working. It is a small factory, the output being 50 gross a day, I believe.

President.—That is not much of a factory.

Mr. Mulherkar.—Exactly.

Dr. Matthai.—When it was working, was everything done by hand?

Mr. Mulherkar.—I have no information.

President.—Where is the Hussein Match Factory?

Mr. Mulherkar.—That is in **Surat**.

President.—The Sultan Match Factory is I think in Ahmedabad.

Mr. Mulherkar.—Yes.

President.—They had no timber when we went to see it. That also is not a very important factory. So that what remains is really those 7 factories here and the Gujarat Islam Match Manufacturing Company in Ahmedabad and Ambarnath.

Mr. Muhammad.—There is one factory at Umreth.

President.—We have not heard anything from that.

Mr. Muhammad.—It has only been recently started.

Dr. Matthai.—Are they turning out matches?

Mr. Muhammad.—Yes, about 5 to 7 cases a day—half size. It is in Kathiawar, near Ahmedabad.

Dr. Matthai.—Is Umreth in British territory?

Mr. Muhammad.—Yes. Messrs. Abdulali Ebrahim are their agents.

President.—Are there any factories that you know of who have not joined your Association on the Bombay side?

Mr. Mulherkar.—No.

Dr. Matthai.—Practically all the factories which are members of your association are private firms, aren't they?

Mr. Muhammad.—With the exception of the Gujarat Islam Match Manufacturing Company, all others are private companies.

President.—We have recently issued a circular to all Chambers of Commerce, Indian and European, on those points which you have heard before.

Mr. Fateh Ally.—In this particular case we have to voice the opinion of the Association. We intend therefore to confer amongst ourselves and send you a reply.

Mr. Muhammad.—We have had no time to consider the circular.

President.—When do you expect to give us a considered reply?

Mr. Fateh Ally.—It is not a question of individual opinion. We have to meet first. As soon as we come to a decision we will write to you.

President.—The trouble about the written statements is that very often the points are not clear. When do you think you will be ready with your views?

Mr. Fateh Ally.—Before Monday. If you could give us a time on Monday, it would suit us.

President.—I think that we could give you the afternoon on Monday.

Mr. Fateh Ally.—Yes.

Warning against speculation.

President.—I would like you also to consider one point which has arisen. As you will see from that circular we have expressed no opinion on those points, and whatever we have said in that circular must be taken as illustrative. As you know, the Bombay business community is sometimes in a peculiar mood. It is apt to speculate on the kind of proposal that might be made by us and occasionally we hear reports that there is a chance of either

the manufacturers or the dealers speculating owing to the fact that they might think that some excise duty or some other tax might be levied which might make it remunerative for them to withhold goods from the market—in a way hoard the goods. It is for them to consider whether there is not some risk involved in a thing like that because after all we may or may not make any proposals. If we found that there was some truth in this that people were speculating on the chance of our making certain proposals and for that reason warehousing matches and so on, it would not be impossible for Government to take steps to protect itself and the consumer by taking such action as might be necessary.

Mr. Fateh Ally.—I think that the best safeguard against a thing of that kind is a statement from the Tariff Board that any proposal regarding excise would apply to goods already in the warehouses.

President.—We cannot make any statement, and it is not our practice to make any statement. I think that it would be to the interests of the manufacturers to understand the position.

Mr. Fateh Ally.—If the speculator thinks that he is going to benefit by hoarding, nothing will prevent him unless it is a statement from the Tariff Board that goods in stock on and from such and such a date will have to pay the excise, in case excise is decided upon.

President.—There is one scheme there—I am just trying to point out—and it is important that the manufacturer should understand this point. Take the scheme which contemplates a Government monopoly or other monopoly. If the Government find that they cannot collect sufficient excise duty because people have hoarded matches, Government can regulate the price by controlling the import of matches and prevent a rise in the price of Indian matches by allowing more imports to take place.

Mr. Fateh Ally.—They cannot reduce the duty on that.

President.—Government might in order to regulate the price. If the Government find that it is deprived of its revenue by an illegitimate method, Government may just as well protect itself by saying all right, if you think you are going to get Rs. 2 or Rs. 3 a gross because there is an excise duty, we will so regulate the imports that the price cannot rise; in that case, people will be hard hit and they will have to thank themselves if Government adopt that procedure. I don't say that Government will do it but I am only saying that Government can protect itself and the consumer against this sort of speculation.

Mr. Muhammad.—So far as my knowledge goes, big factories are anxious to sell off their output and are not in favour of hoarding.

President.—Dealers may do it. I am not suggesting anything, but occasionally we do hear that this is happening.

Mr. Fateh Ally.—That is a very real danger. In fact, prices have already been put up. Ambarnath has put up its prices.

President.—Don't you think that it would be practically forcing the hands of Government to reduce the selling price by allowing more imports to come in?

Mr. Fateh Ally.—That is a thing for which you cannot blame any particular individual.

President.—Government does not want to blame any particular individual but it must see that its revenues do not suffer.

Mr. Fateh Ally.—How can we as manufacturers prevent this?

President.—It is not for me to say anything. You can to some extent in this way. For instance a dealer takes 100 cases a month from you. He begins to ask for 200 or 300 cases; then there is ground for you to enquire why he is asking for so much. That is one of the methods.

Mr. Fateh Ally.—We are to set about preventing this kind of thing.

President.—Because it will be in your own interests. After all if Government takes any measures, it ordinarily intends that you should benefit by its

measures. Government won't take any measures for the sake of taking measures. Here this Board is expressly appointed in order to help Government, so that it might be in a position to take steps which may result in benefit to the industry. If the industry does not assist Government, the industry has to blame itself, so that I think it would be in the general interests if all the manufacturers of matches made it a point to see that this did not happen. That is all I can say to you. As I say one of the way would be this that if a man asks for an unusual amount of matches from you, you must know that there must be some object.

Mr. Fateh Ally.—Why could not Government protect itself by asking that this excise duty should be paid on matches held in warehouses.

President.—But then it is very difficult to trace matches.

Mr. Fateh Ally.—Large stocks can be easily traced.

President.—That may be one of the methods, and it is for that reason that I am throwing out these hints.

Mr. Fateh Ally.—The general impression amongst the public and dealers is that any excise will only apply to goods that will be manufactured on and after a certain date. If the Board could correct that impression, I say it would promptly reduce the danger of this kind of hoarding.

President.—We do not know. It is in a sense for Government. Supposing an excise duty were imposed, Government may not say that it will be imposed after six months but it may say from to-morrow morning.

Mr. Fateh Ally.—Yes, on goods that will be manufactured from to-morrow morning.

President.—Why should that be so?

Mr. Fateh Ally.—That is generally so whether excise or import duty. In the case of the import duty, no goods that have crossed the Customs barrier are taxed. They are free.

President.—Anyhow it is for you to consider whether Government may not take any steps in the event of any excise being levied. We cannot commit ourselves to any course. I think I have done my duty when I have warned you against this sort of speculation on the proposal and I take it that you will communicate this to all the members of your Association and to others also. Now as regards your representation, there are some statements here which have not been borne out by the evidence.

Mr. Fateh Ally.—For instance?

President.—In the earlier part—pages 1 and 2—you deal with the history of the industry. I take it that briefly put the position is this. As soon as Government raised the duty to Rs. 1-8-0, the industry started by importing splints and boxes.

Mr. Fateh Ally.—Yes.

President.—That was found to be fairly remunerative. Then when Government levied a duty on splints and boxes, you started importing wood and making splints and boxes here and that continued and the factories were making very good profits, say, up to the end of 1925, is not that so?

Mr. Fateh Ally.—Yes.

President.—Then, prices began to be cut rather sharply. Now they have reached a level when prices are just remunerative from your point of view. Your fear is that prices may be further cut, and then, may cease to be remunerative altogether, is that right?

Mr. Fateh Ally.—Yes.

President.—Then on page 3 you refer to the colour of the wood and say "It is this fact that has upto now not made the old existing pre-war match factories a paying concern". They have been paying concerns more or less in spite of the difference in colour. Then you say "The foreign competition is so keen that a slight difference in quality which apparently signifies inferiority in any way is sufficient to stop the sale of Indian produce". That is not so.

Mr. Fateh Ally.—The old existing pre-war match factory is the Gujarat Islam Match Manufacturing Company.

President.—That has been a successful company.

Mr. Fateh Ally.—Yes, after this duty and not prior to that.

President.—It has been in existence for the last 20 years or so.

Mr. Fateh Ally.—You know more about it but as far as I learn in the market, it is dependent on the manufacture and sale of Bengal lights for its profits.

Mr. Mathias.—You say “upto now” in the sentence read to you by the President.

Mr. Fateh Ally.—The Gujarat Islam Match Manufacturing Company was the only pre-war factory.

Mr. Mathias.—They have done reasonably well.

Mr. Fateh Ally.—All the factories have been doing well after the imposition of the duty.

Wood Supply.

President.—Later on you say that the import of foreign logs must not be handicapped in any way. That is from the Bombay point of view, I presume? On the one hand you suggest that more Indian wood should be used and on the other hand you suggest that the imports of logs must not be handicapped in any way. These are conflicting propositions.

Mr. Fateh Ally.—What we mean is that till proper arrangements have been made for locating supplies in India—at present no research has been made as to whether timber can be had in large quantities or not—the imports of logs should not be handicapped.

Mr. Mathias.—Which timber is it? I understood that no suitable timber was found and that it was for that reason logs were imported.

Mr. Fateh Ally.—It is not that it has been found, but that it cannot be found so far in places whence logs can be got at an economic price.

Mr. Mathias.—Has it now been found? Have you found it satisfactory?

Mr. Fateh Ally.—We have had sample logs brought over here from Kashmir; we worked them and we found that they were satisfactory. We sent a man out and it was just on the frontier. The man made a contract with the Khan of the place and paid Rs. 2,000. When he started going round, the villagers came and said “he had no right to sell; give us Rs. 2,000”. They simply looted all the money he had and packed him off. After that we did not send anybody else.

Dr. Matthai.—What is the general impression of the Association with regard to areas which have been leased to match factories by the Bombay Government? Do they offer promising opportunities? Take the various areas in the Bombay Presidency for which leases have been granted to match factories here. The experience of the factories with regard to these areas during the past three or four years, does that seem promising for the future?

Mr. Mulherkar.—Do you mean the areas for cutting wood?

Dr. Matthai.—I mean the kind of supplies that you have been able to get from those areas.

Mr. Mulherkar.—It was only last year that the Bombay Government asked for tenders for the cutting of soft wood.

Dr. Matthai.—I understand that for two years or a little over two years about half a dozen match factories in the Bombay Presidency have been getting between them somewhere about two to three thousand tons of wood from the forests here.

Mr. Mulherkar.—That was obtained through fuel contractors.

Dr. Matthai.—My point is this. Speaking from your experience—there are some people who have been having their own leases—can you say as representing the Association whether the future is promising?

Mr. Fateh Ally.—Yes, if efforts are made to keep up the supply. If a tree is cut near the ground it sprouts again—I am talking of bombax at the moment—and then it requires some attention. It must not be allowed to sprout on all sides. Only one branch should be allowed to grow, and if that is done, it will attain a good size and be suitable for the manufacture of boxes. If several branches sprout out, all the logs will be thin and unsuitable.

Mr. Mathias.—You say that as a result of Mr. Ghosh's report Bengal is in a better position to use indigenous timber. The evidence that we have received from the smaller factories is that the supply of wood is very scarce, very expensive and that the timber arrives in a very bad condition from the Sundarbans. They have since April last tried to import sawbya from the Andamans.

Mr. Fateh Ally.—Just four days ago a representative of the Esavi Match Manufacturing Company was in Bombay and he told me that he had no difficulty about wood.

Mr. Mathias.—Which wood?

Mr. Fateh Ally.—Genwa wood. He said that he got it from the Sundarbans.

Mr. Mathias.—I am not speaking of the larger factories. That is the evidence that we have received from the smaller factories.

Mr. Fateh Ally.—Probably the smaller factories are not able to work the timber by hand. I don't understand why the larger factories should be able to use while the smaller factories should not.

Mr. Mathias.—There is no doubt that the supply for small factories is scarce at certain times.

Mr. Fateh Ally.—I understand that there is a regular market established for that.

Mr. Mathias.—The supply depends on fishermen bringing the timber. They bring it in boats which take a very long time to come. When it arrives, it is sometimes dry and the supply also is apparently not easy to get at all times of the year.

Dr. Matthai.—What is your opinion on the question of plantations by factories?

Mr. Fateh Ally.—I think that if Government made it a condition that every tree cut in the forests should be replaced by people who got the concession, it would help to maintain the supply.

Dr. Matthai.—If you take a tree like bombax the difficulty appears to be that you cannot get it in sufficient compact blocks. It is scattered about, is not that so?

Mr. Fateh Ally.—Yes.

Dr. Matthai.—That to some extent might be remedied if you had your own plantations and you planted simul in the same area. Supposing Government declared this industry a protected industry even then it seems to me that you would not consider the question of plantation if you can get imported aspen as cheaply as you are getting now. Therefore if in addition to declaring the industry a protected industry we also made the imported aspen slightly more expensive by putting a duty on it, then you might be prepared to turn your attention to plantations.

Mr. Fateh Ally.—I think so.

Dr. Matthai.—That is a matter in which co-operative action by the Indian match manufacturers can be taken.

Mr. Fateh Ally.—Yes, if Government want the factories to use Indian wood.

Dr. Matthai.—After all the Indian factories who are members of this Association represent a very considerable output and there is a very big demand for wood and if your Association undertakes some kind of joint action in the matter, plantation would not be entirely out of the question.

Mr. Fateh Ally.—But then would it not be met by this suggestion that for every tree cut another tree should be planted?

President.—The trouble is that these trees are scattered about.

Mr. Fateh Ally.—That is true. At the same time, if you go and examine the bombax tree you will find any number of smaller trees around it, because it gives forth some sort of pod.

President.—The idea is this. Aspen and spruce grow in clusters. You get an area covered with the same sort of trees and there is hardly any mixture. I believe in Sweden it is the law that for every tree cut you have got to plant another. There nothing happens because it is the same tree that is put in there amidst trees of the same kind. But here bombax does not grow in clusters, and so if you plant another tree for the one that you cut, you perpetuate the same sporadic growth so to say of the tree and that is uneconomic distribution.

Mr. Fateh Ally.—Why, if we plant one tree for every tree that is cut, we will plant in one particular place. We won't plant all over the place.

President.—What about other trees in the same place? If you cut a bombax tree from one place and plant another, you get only one tree in the same place.

Mr. Fateh Ally.—We would leave that bombax to sprout and if we are to replace the trees that we may cut, then certainly we won't plant them in the same place where we cut originally, because it won't be economic. We will have to plant in one block.

President.—Merely requiring that for every tree that is cut you should plant another tree would not get over this difficulty, *viz.*, that the plantation will not be concentrated.

Mr. Fateh Ally.—Supposing we get an area of five miles and we cut 10,000 trees or so, it would be much more economical for us to plant those trees in one block than to go spreading them all over the five-mile area. We might cut anywhere but then the planting would be certainly done in one place.

Dr. Matthai.—There are other trees besides bombax in the same area.

President.—How can you? It is not clear felling.

Mr. Fateh Ally.—There is any amount of land. I thought the question was that we should start the plantation.

President.—As regards plantation there is no difficulty at all if you have a clear felled area. But if you are to fell trees as you are doing now from different places and if you are to plant one tree in place of one that you cut, it would not help you at all. The trees will still remain scattered all the time.

Mr. Fateh Ally.—We don't approve of planting one in place of one that is cut in the same place.

Mr. Mathias.—Is it your proposal that if you cut 1,000 trees you should plant 1,000 trees in an area set apart for that purpose?

Mr. Fateh Ally.—Yes.

Mr. Mathias.—Once it is planted, you think your duty is done.

Mr. Fateh Ally.—Yes. These trees require very little attention.

Mr. Mathias.—In Burma we were told that these trees require very careful tending for three years.

Mr. Fateh Ally.—I have got trees in my own garden. They require no care at all.

Dr. Matthai.—How long have you had them?

Mr. Fateh Ally.—I told you about one tree cut 7 years ago. It is now in a condition to be recut.

Mr. Mathias.—It is one thing to experiment in your garden which is always clean and another to plant in the jungle.

Mr. Fateh Ally.—It is not watered or anything of that kind.

Mr. Mathias.—I am not speaking of watering. The difficulty in Burma is that the growth of other weeds is liable to choke these trees when they are young.

Mr. Fateh Ally.—Do you mean the bombax tree?

Mr. Mathias.—Yes. Also animals do a lot of damage and trees when young have got to be guarded. Therefore they require very careful tending for three years, and also weeding out.

Mr. Fateh Ally.—I thought that one year would be quite sufficient.

Mr. Mathias.—After plantation if there was anything to be done, you would put the duty on the forest officers.

Mr. Fateh Ally.—If there was anything to be done, it must be like that.

Cottage factories.

Dr. Matthai.—Has your Association any opinion on cottage factories? I mean by cottage factories match factories in which all the machines are hand driven and the output is very small—somewhere about 30 to 50 gross a day. Do you think that there is any case for giving special assistance for the encouragement of the match industry as an entirely cottage industry?

Mr. Fateh Ally.—If the industry is left to open competition, supposing there is no protection or excise and things are allowed to go on as they are, then these factories in course of time must go out of business because they cannot hold out in competition with the machine driven factories.

Dr. Matthai.—Supposing the duty continued and supposing we declared the duty a protective duty, the same result would follow, would it not?

Mr. Fateh Ally.—Yes.

Dr. Matthai.—Do you think that it is necessary for the State to take any special steps to preserve the cottage industry? It has been urged upon us that something should be done and I was wondering whether your Association had any opinion on that subject.

Mr. Fateh Ally.—None of these factories are to be found in the Bombay Presidency as far as we know. In Calcutta they manufacture still a few gross a day in their own houses.

President.—You have got personal experience of Japan.

Mr. Fateh Ally.—Yes.

President.—Are the cottage industries in Japan carried on in the same way as in Bengal or is it merely that some of those factories employ hand labour as some factories do here?

Mr. Fateh Ally.—Do you refer to the manufacture of matches only?

President.—Yes.

Mr. Muhammad.—They have got assembling and dipping plants. They buy boxes from box factories and splints from splint factories and their manufacture of matches is simply confined to assembling.

Mr. Mathias.—Is that the cottage industry in Japan?

Mr. Muhammad.—Yes.

Dr. Matthai.—The actual matches are produced in a big factory.

Mr. Muhammad.—Yes.

Dr. Matthai.—They get their splints from the splint factories and boxes from box factories.

Mr. Muhammad.—Yes, they are done in different places.

President.—You are doing the same here. You make the veneer and distribute it to labour outside, but that is not a cottage industry.

Mr. Muhammad.—In Japan, the box manufacturer sells ready made boxes to the man with the assembling plant. But here the match manufacturers make their own boxes but give them out only for pasting.

Dr. Matthai.—Supposing you had a large number of small factories producing 25 to 50 gross a day, and those small factories got their splints and

veneers from some other big factories and prepared chemicals in their own houses, did the dipping in their houses and produced matches at their cottages at the rate of about 50 gross a day—supposing that was the position, if they asked for any special encouragement, would you as representatives of the Match Manufacturers' Association, support the proposal?

Mr. Fateh Ally.—By buying splints and boxes from an existing factory how could they hope to sell their goods in competition with the machine made goods of the factory?

Dr. Matthai.—If they are not in a position, they want Government to give some assistance.

Mr. Fateh Ally.—On what ground?

Dr. Matthai.—On the ground that it provides occupation for people engaged in a domestic industry.

Mr. Fateh Ally.—For that matter we could give occupation.

Dr. Matthai.—They want assistance on the same principle that the handloom industry deserves some encouragement.

Mr. Mathias.—Would you agree to this? In essence there is no distinction between the small factories which are engaged in dipping and the ordinary match factory except that the former are organised on a very much smaller scale and that the capitalists are very small capitalists and on account of their small resources they are not in a position to obtain machinery.

Mr. Fateh Ally.—Yes.

Mr. Mathias.—So that there is no distinction really between them.

Mr. Fateh Ally.—That is so.

Dr. Matthai.—The actual proposal which was made to us in Calcutta by the Indian Match Manufacturers' Association there was that if it came to levying an excise duty on Indian matches, the products of the cottage industries must be wholly or partially exempt.

Mr. Fateh Ally.—First of all how would the Government differentiate? I would split up my factory into a dozen cottage factories to which I would supply everything, splints and veneers, and thus avoid the excise duty.

Dr. Matthai.—Assuming it is practicable?

Mr. Fateh Ally.—If it is, then I don't mind.

Dr. Matthai.—Would you support it?

Mr. Fateh Ally.—We would support it if it could be managed.

Mr. Mathias.—You appear to be somewhat lukewarm about it.

Mr. Fateh Ally.—It looks to me so difficult to control.

President.—I don't wish to ask you any questions about the Trade Review for Asia. We have asked many questions about this. It does not advance the question. It is written by people interested in the manufacture of machinery who are in constant competition against the Swedish Match Company.

Mr. Fateh Ally.—We have also stated that.

President.—We ourselves have got a good deal of evidence which dealt with that, and I don't think it is necessary for us to go fully into this at this stage anyhow. But I will refer you to page 9 of your letter of 22nd December 1926. I think that it is the very point which we have been discussing. You say that "the Indian Match factories are utilising as much manual labour as possible thereby giving employment to several thousands of Indian labourers although by doing so their cost of production comes to about 4 annas more per gross and they have to sell at cheaper rates than those of the Syndicate because the finish of their product is not exactly like that of the machine made goods; and that the Indian factories are further handicapped in this respect as well". Do you think that both these points are really against the Swedish Syndicate? Do you admit that the cost goes up by four annas more per gross?

Mr. Fateh Ally.—At the time when the representation was made, it might have been four annas but now I think that 3 annas would be nearer the mark.

President.—Even supposing it was three annas do you think that it is an economic proposition to say that though you spend three annas more on an article, you must continue it because it gives employment to some people.

Mr. Fateh Ally.—After all unemployment is a tax on the country.

President.—In a big country like India 4 annas a gross is a very large gift to labour considering the consumption of matches in India. Do you really suggest that we should entertain a proposal like this as a ground for protecting the industry? Does it not show that the industry is inefficient if it spends four annas more per gross than it should?

Mr. Fateh Ally.—The point here is this.....

President.—Look at it from the business point of view.

Mr. Fateh Ally.—Then, I say it is not economical.

Mr. Mathias.—From the country's point of view, it is probably a wasteful method of providing employment. How many people do you think are engaged in the processes worked by hand?

Mr. Fateh Ally.—I do not know. For instance we are at present employing 500 women for filling.

Mr. Mathias.—Probably 30,000 to 40,000 people might be employed in this kind of work if you take the whole of India.

Mr. Fateh Ally.—Possibly.

President.—I think you have yourself admitted that hand made matches cannot compete eventually against machine made matches.

Mr. Fateh Ally.—Yes, because of the cost being higher.

President.—Even so, it will be simply throwing away money, from which the country at large eventually gets no benefit. It will be simply prolonging a thing which ought to die.

Mr. Mulherkar.—The well-being of a great number of people is a benefit to the country.

President.—If you assume that the machine made match eventually must wipe out the hand made match, what benefit is there?

Mr. Mulherkar.—I don't think that the machine made match will eventually wipe out the hand made. The cottage industry will have its standing in the trade.

President.—How can it have?

Mr. Mulherkar.—It cannot compete with the machine made match. But it may have a local market.

President.—Then, it can go on in spite of anything that we may do. You want special protection to be given. You have yourself admitted that in course of time the machine made match must really wipe out practically the hand made match because it would be cheaper.

Mr. Mulherkar.—It cannot wipe out.

President.—Except as regards some local market.

Mr. Mulherkar.—Yes.

President.—If that is the position, it gets the advantage of the local market which is not increased by the whole industry at large getting four annas more per gross, that is the point, is it not? If you have any natural advantage, it is not going to be taken away.

Dr. Matthai.—If you have a place where you have a good market and a good source of supply, you might have a factory there.

Mr. Mulherkar.—Yes.

Dr. Matthai.—But under the circumstances it is not necessary to grant any special assistance to that.

Mr. Mulherkar.—The question of granting special assistance may come in if it is a cottage industry itself.

Dr. Matthai.—You are taking a different view from that of Mr. Fateh Ally. Apparently you are not agreed amongst yourselves.

Mr. Mulherkar.—That question has not arisen in the Bombay Presidency.

President.—You are suggesting that though it costs four annas more per gross, it should be encouraged.

Mr. Mulherkar.—We are putting that point just to show that we are even prepared to sacrifice four annas for the greater well, being of a greater number of people, and thereby we are giving indirect employment to people who would not be getting any employment at all.

President.—True, but do you guarantee that they will continue to get that employment in face of the fact that matches may hereafter be made more easily by hand than by machinery? Would not you be really creating labour trouble? You may give employment to these people to-day but to-morrow or the day after that labour has to be dispensed with on the ground that it is more economical for you to use machinery. Are not you really creating more labour trouble? You are laying the foundations of trouble.

Mr. Mulherkar.—I don't think that that section of the population will create any trouble.

Mr. Mathias.—We heard of a strike only three days ago.

Mr. Mulherkar.—Those sections of the population do not really go out of their homes for employment. They only take advantage of this system. It is not the robust man who would use this means of enhancing his income.

President.—You also say that the Syndicate's matches have a better finish than the matches made by Indian factories. Surely you cannot urge that as a grievance against the Swedish Syndicate that their matches are better.

Mr. Fateh Ally.—It is not urged as a grievance. All that we want to say is that we are paying four annas more which we could save by employing machinery and we still don't employ machinery even though the product of the hand labour is not so good as that of the machine made.

President.—If you state that, then it is a condemnation of the whole industry. After all you cannot run an industry for the benefit of other people. You will largely run it for your own benefit, won't you?

Mr. Fateh Ally.—This is more an appeal to sentiment and nothing else.

President.—Then, you say "At present by reduction in the rates this important industry in its very infancy has come into a perilous condition". We have already dealt with this point. It is also rather a statement on the present figures.

Mr. Fateh Ally.—We are just on the border line.

President.—When this representation was written, the position was not as bad as that.

Mr. Fateh Ally.—The decline in price was so rapid all along that we probably thought that it would very soon come down.

President.—Leaving alone the question of sentiment, can you really blame any competitor who wants a market in the country when he reduces his selling price? You were getting Rs. 2-1-0 in November 1923. The Swedish Match Company came in with Rs. 2. You were still selling at Rs. 1-11-6 or Rs. 1-12-0. What did you expect the Swedish Company to do—to sit quiet and get no market? Take November 1924. They were selling at Rs. 2 and you were selling as before.

Mr. Fateh Ally.—We sold like that because our goods would not sell unless there was a difference of three or four annas.

President.—You were in the field earlier.

Mr. Fateh Ally.—Yes.

President.—And your price in April 1926 was Rs. 1-11-6 or Rs. 1-12-0 and the Swedish price was still Rs. 2 in November 1924, so that they were selling at 4 annas higher. What would you expect them to do except to reduce their selling price in accordance with the drop in their cost of manufacture?

Mr. Fateh Ally.—The point is that our selling at Rs. 1-12-0 did not hinder their sales at Rs. 2 because the impression in the market was that these fac-

tories being owned by Swedish manufacturers their products would be better than those of other Indian factories and consequently they were willing to pay 4 annas more for them.

President.—That would not enable them to get the market. It is only a limited class of people who would buy those matches. They want a market for their goods. Do you seriously allege that there was anything wrong in this?

Mr. Fateh Ally.—It is not that we allege that there has been anything wrong in what they have done but there is a great danger of everything going wrong by what they may do.

President.—Hereafter?

Mr. Fateh Ally.—Yes.

President.—You say in an earlier part of the statement that you cannot help saying that you feel that it is only in India that a foreign syndicate can boldly do such things, viz., cut down the prices. I suppose you know the history of the Swedish Match Company throughout the world. You cannot say that India is the only country where they are doing it. In fact, you will find there is no great country in the world at present where they have not been able to monopolise the market, except France where the State has got a monopoly. Could you name any other country where they have not got a monopoly or a working arrangement as in Great Britain?

Mr. Fateh Ally.—They have not got any arrangement with the Soviet Russia.

President.—There we do not know what they are doing; it is impossible to say. As regards other countries it is a very hard problem for any country. Then there are some allegations made by you on page 10. At the bottom of that page you say "hardly one-third of the total consumption of matches in India is manufactured in India" and then you go on to say that "it is probably due to the fact that a large portion of the remaining two-thirds consumption which is as a matter of fact imported into India finds its way into India without paying the duty".

Mr. Fateh Ally.—There was a time when these illegal imports through the Kathiawar ports were made.

President.—According to the figures that we have, imports have dwindled to 4 or 5 million gross and if you take the total demand of the country as 15 million gross, nearly two-thirds of the country's consumption have been manufactured in the country.

Mr. Fateh Ally.—Yes, at present, but when this representation was made, it was not so.

President.—That was last year—December 1926. Then, there might have been 6 million gross of matches imported. At present so far as I can judge, nearly three quarters of the country's requirements are produced in India. Then, I think as regards prices at which imported matches are sold in the market as we are going to examine the dealers, I won't deal with this part of the representation. On page 12, you say "It is also said that the Jamnagar State has made an annual contract of 3,000 cases of Swedish matches to be brought by transshipment from Colombo". That is not a very big quantity which explains the reduction in imports. It only means 300,000 gross which is a very small quantity.

Mr. Fateh Ally.—This is only put forward as an instance. All these years there have been no imports by Jamnagar.

President.—We can only judge by the figures. Now take the population of the Kathiawar States. I do not know what the population is. But unless we are satisfied that the imports into Kathiawar are far in excess of the proportion of its requirements, you can hardly argue that any matches were illegitimately brought, or at least there was any illicit importation through Kathiawar ports into India. Supposing 1 million gross was the quantity required for the population of Kathiawar and that they did not import much more than 1 million gross, there is no evidence that there is any illicit importation from Kathiawar States into India. That is the sort of evidence which we should require.

Mr. Muhammad.—As regards illicit importations of matches through Kathiawar ports, we have given proofs to the Customs by showing the books. Proofs have been submitted to the Collector of Customs, Bombay.

Dr. Matthai.—How recent is the information?

Mr. Muhammad.—Two years old. The proof was actually submitted from the account books to the Collector of Customs.

Mr. Mathias.—Although smuggling might account to some extent for the reduction in imports, your Association does not deny that the large duty is very largely accountable for the reduction in the imports of matches.

Mr. Fateh Ally.—It is.

Mr. Mathias.—The large duty affected the imports perhaps not to such an extent as would appear from an examination of the trade figures but at any rate to a very considerable extent?

Mr. Fateh Ally.—Yes.

Mr. Mathias.—Your object is merely to call attention to this illicit import which may to some extent falsify the trade figures, and to show that the illicit import has, by the re-establishment of land frontier, been stopped.

Mr. Fateh Ally.—We have to say that it is not entirely stopped.

President.—Have you got any recent evidence since the re-imposition of the barrier that it is taking or has taken place.

Mr. Fateh Ally.—I have got no information. You can learn more from dealers when they come to give evidence.

President.—We want evidence since the re-imposition of the land frontier.

Mr. Fateh Ally.—They are careful not to sell in Bombay. They are now selling as far as Ahmedabad. This barrier can only be crossed by showing a certificate that the duty of Rs. 1-8-0 has been paid in the Native States.

President.—What about the stocks in the Native States? Are they allowed in without payment?

Mr. Muhammad.—We have no exact knowledge of the situation.

Economic unit.

Dr. Matthai.—There is another point on which I should like the Association's opinion. Under present conditions what do you consider to be the size of an economic factory, I mean the minimum size of an economic match factory in India?

Mr. Muhammad.—500 gross, half size.

Dr. Matthai.—Do you consider that an economic unit?

Mr. Muhammad.—Yes, because one peeling machine can peel enough to make 5 cases a day. To have any smaller factory is not economic.

Mr. Fateh Ally.—We understand that the question is what would be the smallest size of a factory that could be run on an economical basis.

Dr. Matthai.—Suppose you had your peeling, veneering and chopping machinery handling 500 gross a day: with 500 gross a day, it would be impossible to use economically machinery after that stage, although for peeling and veneering, it would not be difficult to use machinery on an output of 500 gross a day.

Mr. Muhammad.—One peeling machine would turn out to the extent of 500 gross a day. The chopping machine will chop that amount. As regards frame filling, two frame filling machines would be required.

President.—What about box making?

Mr. Muhammad.—One box making machine, inner and outer, would be quite sufficient; if not, two would be ample.

President.—And for box filling?

Mr. Muhammad.—For box filling, 500 gross is the unit.

Mr. Mathias.—What about wrapping?

Mr. Muhammad.—You have to do it by hand but for other processes, machinery can be used.

Dr. Matthai.—Your point is that you would be able to produce as cheaply as any other factory in India.

Mr. Muhammad.—If the factory is larger, the charges will be smaller.

President.—The point that my colleague has just now put to you is this. Supposing you had two factories, one making 500 gross a day and another making 8,000 gross a day, will the factory producing 500 gross a day be able to compete against the other factory which produces 8,000 gross a day?

Mr. Muhammad.—No, it will not be able to compete. The charges of the bigger factory will be proportionately less.

President.—That is not an economic unit if it is not eventually able to put matches on the market at the same price as the bigger factory.

Dr. Matthai.—Would it be possible for the smaller factory to compete with a factory producing 3,000 gross a day? Practically the problem is this. There is Ambarnath with a capacity of 1,000 gross and there is Andheri with nearly three to four thousand gross a day and Santa Cruz with 3,000 gross a day. Would it be able to produce matches as economically as these bigger factories?

Mr. Fateh Ally.—As far as I can see, the only difficulty would be this. If a factory is to produce 5 cases a day and is built with the intention of producing 5 cases a day, its cost of production and overhead would be as low as that of the factory producing 8,000 gross a day; but in the matter of buying stores, people who are buying in bulk would have a greater pull over that.

Dr. Matthai.—The issue to which it leads is this. Supposing we come to the conclusion that the match industry should be protected and that this revenue duty should be made protective, we have to consider the question of what the fair selling price is. Supposing we take the costs of Ambarnath and on the basis of those costs we decide to fix a fair selling price for Indian matches, speaking as representatives of the Indian Match Manufacturers' Association, would you consider that a fair proposition?

Mr. Fateh Ally.—If you take their costs as the basis—if they give you the details and if after comparing with our costs you are satisfied that their proper costs have been given to you—we should be satisfied.

President.—We have not got their costs. They have promised to give us their costs. They will be published and they will be given in public. You can also attend the meeting on that day.

Mr. Fateh Ally.—There is one difficulty about chlorate of potash. These people control that chemical. Our cost is £25 or £26 a ton and they may take it as £16 a ton.

President.—They claim that they always charge their works at the world price.

Mr. Fateh Ally.—Do you mean market price?

President.—The price at which a consumer who buys in large quantities would purchase.

Mr. Fateh Ally.—Supposing we have to pay for instance £27 in the market and they supply at £26 to their works, I can quite understand the difference of £1 per ton. But supposing they give the price as £15 a ton and if you take their costs based on figures like that, it would be of great hardship to us.

Dr. Matthai.—It is really with regard to stores that you have apprehensions.

Mr. Fateh Ally.—Yes.

Dr. Matthai.—Their operative costs you are not afraid of.

Mr. Fateh Ally.—Not in the least.

Mr. Mathias.—Supposing we took the average price at which a large Indian manufacturer obtained the chemicals and estimated the Swedes' costs

on that basis, *plus* their labour charges and supervision charges, that would be perfectly satisfactory to you, would it not?

Mr. Fateh Ally.—Yes.

President.—Then in the case of distribution, don't you think that they would have some advantage?

Mr. Fateh Ally.—Their selling arrangements are the most cumbersome I have ever seen.

Mr. Mathias.—This ring that you spoke of in Bombay, was that organised by the Swedes or by Messrs. Forbes, Forbes, Campbell & Co.

Mr. Fateh Ally.—It was formerly organised by their Indian dealers, Messrs. Abdulally Ebrahim, and then Messrs. Forbes, Forbes, Campbell & Co. took it over as their selling agents.

Mr. Mathias.—Messrs. Forbes, Forbes, Campbell & Co. are responsible for the selling arrangement which is not directed by the Swedish Company at all.

Mr. Fateh Ally.—They have to sell according to the price dictated by the Trust and charge the commission.

President.—Their cost of distribution is cheaper. They establish centres and send wagon loads of matches to those centres. They get railway concessions which small factories are unable to get. That is one of the points I was referring to. You cannot legislate against their being able to get railway concessions from railway companies because they are "bigger consumers". As regards your proposal on page 12 about the special excise duty, I think we will discuss it when we come to the circular. Then, you say "That proper control should be exercised on the imports of foreign matches into Native States by transshipment methods which are likely to be resulted into a deficit in the customs duties by the transshipment right being abused". Could we get over the difficulty by insisting that no matches should come into India unless they bore our labels?

Mr. Fateh Ally.—If that was done it would be all right. For instance, in the case of a Government monopoly, they would have their own label.

President.—Under any system we will levy this duty of Rs. 1-8-0 on foreign matches. Every box that comes into India—no matter whether it comes from the Indian States or direct—must bear a label; would that not get over the difficulty?

Mr. Fateh Ally.—The position would remain unchanged.

President.—They have to buy stamps from Government to put them on.

Mr. Fateh Ally.—Then it would be all right.

President.—If we have stamps, we must have stamps for both imports as well as excise. Your allegation is that at present they say that a duty of Rs. 1-8-0 is charged but in point of fact they remit it or have some other arrangement. But supposing in British India if we insist that no matches shall enter British India unless they bear the revenue stamp?

Mr. Fateh Ally.—If you make the present duty a protective duty and against any excise that is put on the Indian manufactured article you put an equal amount of consumption tax or excise on the imported goods, then the imported goods would require a stamp of only this excise.

President.—The whole duty *plus* the excise duty.

Mr. Fateh Ally.—If your excise is 8 annas and the duty is Rs. 1-8-0, then the imported goods would have stamps to the value of Rs. 2.

President.—Why not?

Mr. Fateh Ally.—What would happen in the case of transshipment?

President.—Which transshipment?

Mr. Fateh Ally.—Supposing we want to ship matches from here to the Persian Gulf?

President.—You take your goods to the bonded warehouse and tranship from there.

Mr. Fateh Ally.—If we have put stamps, how can we get refund on that?

President.—This does not apply to exports. For exports there will be a special provision as in other countries.

Mr. Fateh Ally.—These goods need not be stamped then.

President.—Government will find some way.

Mr. Fateh Ally.—If you insist on all matches bearing stamps, it would be an effective safeguard against illicit imports.

President.—That would be an argument in favour of the introduction of stamps in the Customs.

Mr. Fateh Ally.—Yes.

President.—You say “That handicaps in the shape of extraordinary duties levied by Native States upon matches manufactured in British India should be removed”. Can you really expect that? Why should the Indian States not manufacture their own matches?

Mr. Fateh Ally.—If they had no factory and if they simply levied the duty?

President.—Why should they favour you at the expense of their own revenue?

Mr. Mulherkar.—If Government follow the system of fixing stamps on imported goods as suggested by the President, then this question will naturally be solved. I don't think that the States will be anxious to have imported goods for the purpose of redirecting them into British India.

President.—If Government were to do as you suggest in (4) of your representation, it would mean that Indian States could not have their own matches manufactured within the States.

Mr. Mulherkar.—That was not their point in levying their duty. Their point was to encourage imports which could be redirected into British India.

President.—That we have generally discussed. I am asking you a general proposition—can the British Government insist upon a favourable treatment being given to Indian matches imported into Indian States? They may say that they are going to manufacture matches.

Mr. Mulherkar.—On that consideration it could be levied and not otherwise.

President.—Don't you think that would be the natural consequence if you don't allow any matches to come into British India unless they pay this duty? The Indian States will lose their revenue and so they would be justified in saying “we will manufacture our own matches or we will import our own matches and get the import duty”.

Mr. Mulherkar.—They will be justified to the extent to which imported matches are allowed in their own States.

President.—Why should you claim any interference with their rights as regards their revenue from their manufactures?

Mr. Mulherkar.—That will depend upon the commercial treaties.

President.—All treaties can be modified. I am just talking to you from the ordinary point of view. Have you any right to say to them that your matches should not be taxed?

Mr. Muhammad.—Supposing their matches are made in the Native States, will the same excise duty apply to the Native States' matches?

President.—Why should we bother about that?

Mr. Muhammad.—Supposing they don't impose any excise duty on matches manufactured in Indian States.

President.—We say that no matches shall enter British India unless they bear stamps.

Dr. Matthai.—The only thing that might happen is that your matches might not be able to sell so cheaply in the Indian States?

President.—They may levy an import duty.

Mr. Fateh Ally.—Yes, they may.

President.—Would it be possible for you to let us have your opinion in writing by Saturday afternoon so that we may be prepared to examine you on Monday?

Mr. Fateh Ally.—We will try to do that. There is one point to which we beg to draw the special attention of the Board and that is forest research, that is to say instructions should be issued to forest officers to undertake research about the suitability of particular kinds of wood, etc., for our information. At present we cannot get any information at all from the Forest department. For example Bombax has been declared non-existent so to say because they do not derive much revenue from it. So it would be fair if forest officers were asked to keep a record by undertaking enumeration of trees. Unless that is done we never know where we are as regards our supplies.

President.—We have got to satisfy ourselves whether it would pay each local government to carry on this research.

Mr. Mathias.—The Bengal Government has done it, I think, but the result is not very obvious.

Mr. Fateh Ally.—Quite true, but the Bombay Government has not done anything in the matter so far.

President.—The point is that unless the local government has a very large demand for it you can hardly expect it to undertake this work. That is one of the points we are considering. Supposing we found a province suitable for plantation or anything like that and that province saw there was a market for the wood, it might be prevailed upon to undertake the work for that province, or it might be that it would not pay any particular province to undertake research only for the benefit of that particular province but that might be remunerative for one provincial government to undertake the work for the whole of India; these are points which we have got to consider.

Mr. Fateh Ally.—If they find that they have this wood for disposal then the factories are there to make use of the wood; they need not be afraid of not having a market for the stuff.

President.—We are examining the forest officers of some of the local governments and we have got to hear what they have to say about it.

Mr. Muhammad.—They will give their evidence without going in for research and therefore without any practical experience. They have no means of examining the point. That is the point to which we want to draw the Board's attention.

Mr. Mathias.—They must have working plans?

Mr. Fateh Ally.—Not at all.

Northern India Chamber of Commerce, Lahore.

Letter, dated 22nd January 1927.

I am directed to refer to the Press Communiqué issued by you under date the 29th November 1926 on this subject, copies of which were forwarded to this Chamber with your No. 897, dated 30th November 1926, and to set out hereunder the views of this Chamber on the question. It is regretted that it was found impossible to forward the views of the Chamber by the 31st December as requested, and trust they will now be taken into consideration.

To refer in order to the points set out in paragraph 2 of the Communiqué, this Chamber is of opinion that the three conditions laid down in paragraph 97 of the Report of the Indian Fiscal Commission are fully satisfied in the case of the match industry, and that the industry should be protected. The first condition is that "the industry should be one possessing natural advantages, such as an abundant supply of raw material, cheap power, a sufficient supply of labour, or a large home market," and Northern India satisfied each of these requirements. Wood is, of course, the main raw material, of which suitable varieties for splints and veneers are plentifully available in the forests of the Punjab and Kashmir. The necessary chemicals and paper, which constitute about 20 per cent. of the cost of the finished boxed match, are at present mostly imported, but India possesses great possibilities in this direction, and the growing demands of the match industry must automatically stimulate the development of the chemical and paper industries. The raw material for these two industries exists in abundance, and once a substantial demand is established, India would be able to supply, at least, her own requirements of paper and chemicals within a few years. Reasonably cheap power, such as required for the match industry, exists at present in Northern India and Kashmir, and when the Mendi Hydro Electric Scheme begins to function in the near future, extremely cheap industrial power will be available. Labour is plentiful, and although superior technical advice is mostly non-Indian at present, and highly paid, Indians are being taught in the various factories, and quickly acquire the necessary skill. A very large home market also exists, which is at present almost entirely held by foreign manufacturers.

The second condition laid down in the Report of the Fiscal Commission is that, "the industry must be one which without the help of protection either is not likely to develop at all, or is not likely to develop so rapidly as is desirable in the interests of the country." Since 1922 when the present import duty, which can be ranked as a protective duty, was imposed, the import of matches into India has decreased from 1,36,80,801 gross in 1921-22 to 79,28,522 gross in 1925-26, a decrease over 57 lakhs gross. There is nothing to show that the consumption has decreased: the inference to be drawn from these figures is, therefore, that the import duty, acting as a measure of protection to the industry in India, has enabled that industry to increase production in India by about the 57 lakhs gross above referred to. The match industry was started in India about thirty years ago, and made small progress until 1922-23, and while some of the recent progress made must be put down to the overcoming of technical difficulties, and the greater availability of Indian capital for industrial purposes, the great rise in Indian manufacture is due mainly to the imposition of the present high rate of import duty in 1922 which has acted as protection to the industry. It must be pointed out, however, that the Indian industry using indigenous timber would have been still more firmly established by now, had it not been for systematic and continued evasion of duty on matches first by import of splints and veneer and latterly by the import of match logs on which no special duty has, as yet, been placed.

The third condition laid down by the Fiscal Commission is that "the industry must be one which will eventually be able to face world competition without protection." While the quantity of matches manufactured in India has arisen very rapidly during the last few years, the manufacture from indigen-

ous timber represents only a portion of this increase. In order to enable the Indian match industry to eventually withstand world competition, it is necessary to develop the use of indigenous timber, which is, in the opinion of this Chamber, the slower but far surer process. There is no doubt that steady work with indigenous timber will enable considerable economy to be effected in the present cost of manufacture, within a few years, and that the quality of the finished Indian match would be considerably improved. The prospects of securing these ends are very encouraging in Northern India, and this Chamber is therefore of opinion that after a few years' protection, on the lines laid down in the summary to this representation, the match industry will be established on a sound enough basis to compete successfully with foreign manufacturers in the home market, and possibly overseas, without further need of protection.

The second point referred to in the communiqué is regarding the protection required, and the methods by which such protection should be given. This Chamber is of opinion that the present rate of import duty on matches, splints and veneers should be retained and transferred to the schedule of protective duties, and that an increase of duty on imported match logs be imposed in order to protect the manufacturer in India using indigenous timber. It is here necessary to point out that the import duty of Re. 1-8-0 per gross on finished matches was imposed in 1922, for revenue purposes, and that ever since that time a systematic and successful attempt has been made to evade the duty, first by the importation of splints and veneers and, when this was checked by the imposition of a higher duty thereon, by the import of match logs. The suggestion to tax the imported match log at an increased rate is in keeping with the previous policy of Government of preventing evasion of the duty on matches and is, moreover, essential if indigenous timber is to be afforded a chance to develop.

A point which must be emphasized is the fact that the actual fall in revenue is not so great as it appears to be, for, as a partial set-off to the decline under consideration, there must be taken into account the increased customs revenue under the head chemicals, paper and match logs, and if match logs are made dutiable at a higher rate, as suggested, the deficit will be very considerably made up. Another factor which deserves consideration in connection with the decline in match revenue is the increased import of matches through Native States Ports. It must be recognized that the industry if based on indigenous timber, will be a more substantial source of Government revenue as compared to the industry based on foreign timber. With the increase of matches manufactured in India, the fall in import revenue in the future is likely to become a serious question. The greater use of indigenous timber will more effectively counterbalance this, for, in the case of indigenous timber in addition to forest revenue there will be an increased railway revenue on carriage of all raw materials incidental to manufacture. This Chamber is further of opinion that at this stage it would be fatal to the industry to tax, in any form whatever, the match manufactured in India from indigenous wood.

This Chamber has taken up this question from the view-point of the manufacturer in India using indigenous timber, as the Chamber is of opinion that the indigenous timber has a genuine and strong case for protection, and that match industry in India can properly develop, flourish and rightly claim to be an industry of the country only if indigenous timber receives a suitable stimulus, which it pre-eminently deserves in Northern India. The manufacturer, Indian or foreign, using imported logs is, as things stand at present, only benefiting himself by evading the taxation levied to meet Government budget and so thereby injuring Government revenue. Between manufacturers using imported wood, the Indian claim for preferential treatment over the foreigner is therefore clearly based more on selfish considerations, than on grounds of sound economics; and this Chamber therefore consider their case to be a poor one. Moreover the Indian manufacturer using foreign wood is in many cases the agent of foreign manufacturers, and preferential treatment to them may seriously jeopardise the development of the industry using Indian timber.

To summarise the statements made above, this Chamber is of opinion that:—

1. The three conditions laid down in paragraph 97 of the Report of the Indian Fiscal Commission are satisfied in the case of the match industry in India, and that the industry should be protected.
2. The present rate of import duty on matches, splints and veneers should be retained, and made a protective duty.
3. A suitable increase in the duty on imported match logs is essential in order to adequately protect the interests and development of the indigenous match timbers, and also to prevent evasion of the duty on matches, splints and veneers.
4. It would be detrimental to the industry to tax the manufacturer using indigenous wood, at this stage with a view to recoup the whole or a part of the decrease in Customs revenue from foreign matches and raw material.

This Chamber desires to emphasise the fact that the above proposals will inflict no hardship on the consumer, and it is not suggested that the duty on foreign matches should be increased, whilst the manufacturer using Indian timber will be enabled to place first class matches on the market at a much lower prices.

The Federation of Indian Chambers of Commerce, Bombay.

Letter dated 15th February 1927.

I am directed to forward herewith a copy of the resolutions adapted by the Fourth Session of the Indian Industrial and Commercial Congress and to draw your attention to Resolution No. 8, with a request to place the same before the Tariff Board for its information.

* * * * *

8. (a) This Congress is of opinion that the Indian Match Industry fulfils all the conditions laid down in paragraph 97 of the Indian Fiscal Commission and therefore deserves to be protected.

(b) This Congress, therefore, urges that the present rates of import duty on matches, splints and veneers be maintained and that facilities be provided to make suitable indigenous woods easily available and that transport facilities be afforded to the industry.

(c) That this Congress recommend to the Government of India that in order to enable the Indian Match Industry to overcome its technical difficulties and to be developed, legislation be undertaken by them to the effect that all Trusts of foreign capitalists establishing factories in India, should pay an excise on their products, the amount of such excise being fixed at a figure, calculated to prevent such Trusts from strangling the Indian Match Industry with a view ultimately to monopolising the market.

(d) That it be also enacted that the inclusion of a few Indian capitalists in such a Trust should not be considered a plea for its exemption from the operation of the above rule, such mixed Trusts being entitled only to a reduction in the amount of the excise in proportion to the Indian capital thus employed.

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The Buyers and Shippers Chamber, Karachi.

Letter, dated 19th March 1927.

With reference to the Government of India, Department of Commerce, Resolution No. 235-T. (14), dated 2nd October 1926, *re* enquiry into the

prospects of the match industry in India, I am directed by my Chamber to state as under.

The fact that the decline in the Customs revenues has been the cause for the enquiry in the matter leaves a presumption that Government has its revenues as the foremost point for consideration in coming to a decision in this behalf. But my Chamber, would, with due deference, suggest that Government should rather have as basis for their decision in the matter the fact that prosperity of the subjects is the prosperity of the State and that therefore the State need not hesitate to make a little sacrifice if it could help the general prosperity of its subjects. Now if this be the angle of view, the result is that Government must needs encourage an industry that would lead to the prosperity of the country regardless of its temporary adverse effects on the revenue to any reasonable extent.

Now the wood—the chief raw material in the manufacture of matches is already available in many parts of India and Burma with proper development of forest resources there could arise no question of any difficulty in the requisite supply thereof. Again matches being an article of daily necessity even to the poorest of the population, the question of inadequate home consumption could have no place in a vast country like India.

The comparative standard of India in arts and industries is in itself sufficient proof of urgent necessity for all possible protective measures to be adopted with a view to elevate its present standard side by side without which every enterprise is bound to meet with failure as a result of confrontation from outside competitions. This fact gets well supported by the fact that but for the present enhanced rate of import duty on this commodity it would have been impracticable for the Indian match manufacturers to achieve what little they have.

With wood in abundance as a result of proper development in forest resources, great home consumption, cheap labour as is always available, doing away with imported skilled technical labour at present employed and removal of other minor difficulties at present facing there is, in the opinion of this Chamber, every likelihood of this industry being eventually able to face world competition without protection.

My Chamber are though inclined to believe that this industry, which as explained above, satisfies all the three essential conditions laid down in paragraph 97 of the Report of the Indian Fiscal Commission, may in the long run help to make up the losses meanwhile sustained in the revenues, of course, in some different shape, say, by increase in Income-tax and in Customs duty on the necessary chemicals imported, as well as the export duty on this commodity supplied beyond British India, yet with the facts in hand it is beyond doubt that this industry should fail to lead to the prosperity of the country, if allowed to live and as such it ought to, in view of the general prosperity of the country, be encouraged regardless of loss to the revenues to any reasonable extent.

Burma Chamber of Commerce, Rangoon.

Letter, dated the 24th March 1927.

I am directed to thank you for your letter No. 201, dated March 3rd, 1927, and to say that this Chamber has no useful evidence to offer in respect of the Match Industry.

Burmese Chamber of Commerce, Rangoon.

A.—WRITTEN.

Letter, dated the 29th March 1927.

With reference to your letter No. 247, dated the 25th March 1927, I am directed to express regret at the shortness of notice from you, and that the

Chamber is of opinion that Burma affords a good field for the development of match industry in the province.

But for the encouragement of the local industry my Chamber is of opinion that there ought to be no change of the import duty on match, *i.e.*, my Chamber believes that the duty should be kept as at present and no increment is to be contemplated as otherwise the consumer will be badly affected; but with a view to encourage local industry, my Chamber believes that import duty on raw materials, such as special machinery, Phosphorus, Sulphur, etc., necessary for the industry, should be reduced and that the Forest Department should take less royalty or exempt for some period of years, if possible, on match wood. Further, the Forest Department should help in the encouragement of industry, by planting such trees, as suitable for match wood, at one spot, so that transshipment of timber may not be too costly. The Chamber also learns that the matches, at present, produced are rather inferior in quality and as such the proprietors should be made to guarantee to improve their products, as a condition for preferential treatment, proposed.

With reference to your request to depute a delegate, I am directed to state that U Thin Maung, Proprietor, Burma National Stores, has been deputed to give evidence on the lines suggested above.



BURMESE CHAMBER OF COMMERCE.

B.—ORAL.

Evidence of Mr. THIN MAUNG, Delegate on behalf of the Burmese Chamber of Commerce, recorded at Rangoon on Thursday, the 30th March, 1927.

Introductory.

President.—Who is the President of your Chamber?

Mr. T. Maung.—Mr. M. M. Ohn Ghine, M.L.C.

President.—We are very sorry that we were not able to give you longer notice. It was really an oversight on our part. We should have sent you intimation earlier. But I am glad that you have been able to come here to assist us. When was this Burmese Chamber of Commerce founded?

Mr. T. Maung.—About 1918.

President.—It represents the principal Burmese Commercial interests.

Mr. T. Maung.—Yes.

Dr. Matthai.—How many members are there?

Mr. T. Maung.—Over 40 or 50.

President.—You have got a representative now on the Development Trust.

Mr. T. Maung.—Yes.

President.—You have also got one on the Port Commissioners.

Mr. T. Maung.—We refused it because they made it a conditional offer. We are on the Legislative Council, Burma.

President.—On the Corporation, I don't think that you have any representative.

Mr. T. Maung.—No.

Dr. Matthai.—Is any match manufacturer a member of your Chamber?

Mr. T. Maung.—No, but we have as members some match wood suppliers.

President.—Do you mean traders in matches?

Mr. T. Maung.—Traders in both match wood and matches.

Views of the Chamber on the existing duty on matches, etc.

President.—You are in favour of the continuance of the present duty.

Mr. T. Maung.—I am in favour of the continuance of the present duty because any increase in the duty tends to push up the price which would amount to indirect taxation.

President.—Would you have any objection to paying the same price as you would have paid for foreign matches with the duty?

Mr. T. Maung.—We have no objection, if you can control the price.

President.—What I mean to say is this. When the Government imposed the duty of Rs. 1-8-0 the price of foreign matches was about Rs. 1-2-0. So, the price in the country would be about Rs. 2-10-0. So long as the price does not rise above it, you have no objection.

Mr. T. Maung.—I have no objection so long as the price remains the same but it generally happens that when we impose a protective tariff, the prices of foreign manufacture go up. They may not go up immediately but the ultimate result is that prices will go up and it will be felt by the general consumer.

President.—As it happened, the prices did not go up because of the competition amongst the manufacturers in the country.

Mr. T. Maung.—Competition will no doubt keep down the prices. But I am afraid that the products of local manufacture are not up to the standard of foreign matches.

Quality of Indian made matches.

Dr. Matthai.—Do you mean the quality of the matches?

Mr. T. Maung.—Yes.

Mr. Mathias.—Your statement is rather sweeping. Would you class all manufacturers in Burma in that statement?

Mr. T. Maung.—Yes.

Mr. Mathias.—Are there not some Indian matches which are almost as good as foreign matches?

Mr. T. Maung.—In Burma, the local product is not as good as the foreign product.

Mr. Mathias.—Have you tried matches produced by Adamjee's?

Mr. T. Maung.—Yes.

President.—Formerly they used to make matches out of different classes of wood, viz., Letpan, Didu, etc. The colour was brown and not white. Now they make splints out of Sawbya, and in general appearance, quality, etc. Indian matches compare well with Swedish matches. This idea that Indian matches are inferior in quality grew in the country at the time when matches were made out of different classes of wood. Also it might have happened that importers had found it to their interests to say that Indian matches are inferior in order to sell their own matches. Look at the quality of these matches (samples shewn). Would you object to using these?

Mr. T. Maung.—We won't object to using these provided they keep down the price. If they want as good a price as is commanded by the foreign product, we won't be induced to buy.

President.—At present, big size matches, locally made, are sold at about Rs. 1-8-0 per gross, whereas Swedish matches are sold at Rs. 2-10-0. When you get Indian matches at this price, it is not a great hardship on the consumer, is it?

Mr. T. Maung.—Not, if the number of sticks be the same.

President.—There is one point that you have raised and that is that the proprietors should be made to guarantee to improve their products.

Mr. T. Maung.—Yes.

President.—It is very difficult to enforce that guarantee. What would happen is this that better classes of manufacture would, in course of time, push out inferior matches. That is all that may be reasonably expected. Can you suggest any way by which you can ask for a guarantee?

Mr. T. Maung.—Competition is the only way that can bring about an improvement in the quality.

President.—That is the main thing. If the industry establishes itself in the country, then the better class factories would produce a better class of matches and in that way either the inferior matches may go out altogether or they may have to sell at a much lower price.

Mr. T. Maung.—Quite. There may be inferior matches sold in the country, even in that way.

President.—Two different qualities cannot be sold at the same price.

Mr. T. Maung.—Take the case of German umbrellas and Burmese umbrellas. They are wholly different, produced by wholly different classes of people and under different circumstances. Both of them find a market. So also in the case of inferior and superior matches, they may find a market.

President.—But at different prices?

Mr. T. Maung.—Yes.

President.—What you want to ensure is that it should be seen that the quality of Indian matches does not deteriorate because of protection.

Mr. T. Maung.—Yes. What we are afraid is that superior matches of foreign manufacture might be entirely excluded so that there would be no competition whatever to improve the standard in Burma.

Dr. Matthai.—That is an important point.

President.—It should be made possible for the better quality of matches to come into the country so that the better quality may be maintained.

Mr. T. Maung.—Yes.

President.—But eventually the foreign matches must disappear.

Mr. T. Maung.—That is what we want. Of course the local industry must be encouraged.

Burmese labour.

President.—Have you any experience of the Match Industry? Have you been to any match factory?

Mr. T. Maung.—Although I have been to one or two factories I cannot claim any particular knowledge of the match industry.

President.—Do you know that a large amount of Burmese labour is employed?

Mr. T. Maung.—Yes.

President.—Especially in the box making and box filling processes?

Mr. T. Maung.—Yes.

President.—The evidence is that the Burmese women are particularly good at this kind of work. Do you think that there will be sufficient supply of that class of labour in Rangoon?

Mr. T. Maung.—I think, there is.

President.—There is, I think, a fairly large Burmese population in Rangoon and round about in the villages?

Mr. T. Maung.—Yes.

President.—You consider that it would be a good thing for the province to have an industry where people can get employment?

Mr. T. Maung.—It is good. That is why we should encourage the local industry simply to give employment to the proper classes of the people.

Import duties on raw materials.

President.—Then, you suggest that in order to encourage the local industry the import duty on raw materials such as special machinery, phosphorus, sulphur, etc., necessary for the industry, should be reduced.

Mr. T. Maung.—Yes, it is a very important factor.

President.—But, you see, there are certain raw materials used by the Match Industry which are also used by other industries, so that if they were to have a general exemption, the revenue may suffer a lot.

Mr. T. Maung.—That may be so.

President.—In any case, the burden of the tax on the imported raw materials is not very high. Assuming that they consume about four annas worth of chemicals in the making of one gross of boxes, it is about half an anna, so that it would not help the industry so very much even if the duty was removed. As I have told you before, you cannot remove the duty because the same chemicals are used by other industries. For instance, sulphur comes in free.

Mr. T. Maung.—What we mean by special machinery is machinery specially designed for match-making.

President.—The duty on machinery is only 2½ per cent. It is not an expensive item.

Mr. T. Maung.—Quite. But some encouragement should be given to help the local manufacturers because they may be afraid of a combine in foreign

countries which may prevent the Indian manufacturers from getting their machineries, chemicals, etc., at a cheaper price.

President.—This would be necessary only if the proposal was that the duty of Rs. 1-8-0 should be reduced. So far as we can see there has been nothing like a proposal for the removal of the duty, except from one firm, I think. On the whole the majority of people are in favour of retaining this duty of Rs. 1-8-0. Now, if that duty is retained the question of the removal of the duty on raw materials does not arise because no change is required.

Mr. T. Maung.—That is so.

Forest Royalties.

President.—Then as regards the rate of royalty charged by the Forest Department. The royalty charged is very small, is it not?

Mr. T. Maung.—Yes, about Rs. 4 to 6 per ton.

President.—Of course Messrs. Adamjee Hajee Dawood and Company pay Rs. 12-8-0; that is perhaps because he wanted to be sure of his raw material. How much less can Government charge than Rs. 4?

Mr. T. Maung.—Formerly for letpan, didu and sawbya the royalty was Re. 1 per ton in pre-war days.

President.—They don't fix any royalty but people go and tender?

Mr. T. Maung.—Yes, people offer to pay high rate of royalty and Government accepts the highest tender of course!

Mr. Mathias.—In any case a royalty of Rs. 4 per ton comes to a fraction of an anna per gross; with transport charges and so on the price of wood delivered at the factory comes to Rs. 35 a ton?

Mr. T. Maung.—If you add heavy royalty over and above extraction and transport charges it would be very expensive. However, if the manufacturers do not grumble about the royalty why should we?

President.—Of course the most important point from their point of view is that they must get the necessary quantity of wood.

Mr. T. Maung.—I think they are the natural products of Burma and it only requires research to make them available in large quantities.

President.—You suggest planting, do you?

Mr. T. Maung.—Yes.

President.—We have gone into that question with the forest authorities.

Mr. T. Maung.—In the virgin forest there need not be any difficulty about match wood, I mean in the forests lying between Moulmein and Toungoo and Moulmein and Tavoy where there are heaps of match wood standing.

President.—It has been suggested that there are fairly large quantities in the Tenasserim division. Are you familiar with Pegu.

Mr. T. Maung.—No. I am only familiar with Pegu.

President.—Messrs. Adamjee Hajee Dawood and Company have got a lease in the Insein Division and they expect to get about 6,000 to 7,000 tons a year from that forest and the Government are willing to make experiments in plantation.

Mr. T. Maung.—I think Government should not start this experiment in valuable reserves but begin with the fuel reserves in the neighbourhood of riverine and railway villages and make experiments there by planting, so that there can be less transport expenses.

President.—They have not yet decided where they are going to experiment. The main idea is that experiments should be undertaken and they are willing to take necessary measures in that direction.

Mr. T. Maung.—I see. So far as we are concerned our only anxiety is to safeguard the interest of the consumer and at the same time to see that the industry develops in such a way as to provide more employment to the

poor and labouring classes of Burma. If you increase the duty everyone will feel that his pocket has been touched. No matter what the fiscal policy was everybody would like to have matches as cheap as possible, but if you increase import duty on foreign matches the price of foreign matches will go up and there will be this feeling of anxiety.

Dr. Matthai.—Is there any feeling in Burma that the price of matches is high?

Mr. T. Maung.—There is no such feeling at present, but what I suggest is that protection should not be at the expense of the consumer.

President.—Do you think that the smoking habit in Burma is increasing?

Mr. T. Maung.—I should think so. It is a national habit I should say.

President.—Do the Burmese use anything else for lighting his cigars?

Mr. T. Maung.—He uses matches now-a-days. Matches have become one of the necessities of life.

Conclusion.

President.—Before concluding our proceedings I would like to express on behalf of the Board its deep appreciation of the facilities given to us by the Government of Burma. The Hon'ble the Minister for Forests not only gave us a very cordial welcome to the Province, but he gave us every facility for collecting all the necessary data for the purposes of our enquiry. The Chief Conservator of Forests and the other Forest Officers showed a great deal of keenness in the proceedings and spared no pains to place before us all the information that they had in their possession. Our thanks are also due in a special measure to the Hon'ble the President of the Legislative Council, Mr. O. deGlanville, for the courteous manner in which he provided us with office accommodation in this very fine building. In fact, without this very good accommodation that we have had, our work would have been done under very great difficulties. We are also indebted to the Hon'ble the Chief Justice for having lent us the services of a very able interpreter. The examination was very largely facilitated by his assistance. The public bodies also, such as the Burma Indian Chamber of Commerce and the Burmese Chamber of Commerce, have also rendered us great assistance for which we are also very grateful. It has not been possible for the Burma Chamber of Commerce to come and assist us in this enquiry and we should have welcomed their assistance because they represent very great commercial interests in the province. However, they have told us that they are not in possession of any information which would be of use to us. I had personally hoped, however, that it might have been possible for them to collect some information which might have been relevant to the proceedings before us, and I hope that at some future date it may be possible for them to co-operate with us and to furnish us with their views on what appears to be a very important enquiry from the point of view of this province. Messrs. Steel Brothers and Company were good enough to come and give evidence before us from which we derived very great assistance. The principal applicants in this province, Messrs. Adamjee Hajee Dawood and Company have also been of great help to us. They have left no stone unturned to assist us and they have laid all their materials before us without claiming privilege as regards any of the facts mentioned either in their written representation or in their oral evidence. I think this is an example which may well be followed by other applicants when we tour India in connection with this enquiry.

The Indian Merchants' Chamber, Bombay.

Letter, dated 20th April 1927.

I am directed to send to you hereby the views of the Committee of the Chamber with regard to the various queries referred to in the questionnaire.

2. My Committee do not answer the questions seriatim as many of the questions relate to matters technical concerned with the actual working of the match manufacturing factories, with which they are not directly conversant and as such are not in a position to express any opinion thereon.

3. There are, however, certain points in the questionnaire which are of general importance and they would like to deal with such points only.

4. *Introductory.*—My Committee are aware that there is a general belief, though unfounded, to the effect that all-Indian Matches are inferior to the imported ones. While they do not subscribe to this impression, they have reason to believe that it is due to an erroneous idea of considering the colour of the splints to be the main deciding factor in the quality of matches; if the quality is considered from the standard of utility of imported against Indian matches, it will be difficult to maintain that the Indian matches are not equal in quality to the former.

5. *Wood.*—Wood soft and suitable to the requirements of the manufacture of matches is the principal raw material and such soft wood is neither used as timber nor as fuel but forms merely a part of the forest-waste and was so considered till match factories in India came into existence. My Committee are of opinion that India with such vast and unexplored forests should be in a position to supply all the soft wood required for this purpose, if proper researches are undertaken seriously by the Government. They are informed that the Government of India have directed the Forest Research Institute of Dehra Dun to make researches into the suitability of soft woods available for the manufacture of matches and that some attempts have already been made towards that end, and they will much appreciate if these attempts result in proper utilisation of Indian forests towards building up so important an industry which supplies an every day necessity of life. My Committee would like to suggest that the forest Department should also take in hand the plantation of such species of soft woods as would be required for this industry. The Government of Bombay have, they learn, made a beginning in planting Sawar trees (*Bombax Malbaricum*) and if such plantations are made on an extensive scale, they will help the problem of the sufficient supply of soft wood to a great extent. There is another handicap, which my Committee would like to point out to the Board, and it is the very prohibitive railways and steam transport charges for the wood. Some railways have now allowed these logs of soft wood to be carried at "fuel rate" instead of a higher rate of "timber," provided the logs are required for *bond fide* use of a match factory. But such a trivial concession does not go to any appreciable extent in inducing Indian Match Manufacturers to use Indian wood for their factory. My Committee believe that proper facilities by way of cheap transport will encourage match manufacturers to use Indian wood to a greater extent. They further suggest that right of extraction of soft woods from forests should be given by tender to *bond fide* match manufacturers only so that the resources of the Indian forests would be more and more utilised by this country.

6. *Other raw materials.*—Other raw materials that are required in the manufacture of matches are mostly chemicals and my Committee are of opinion that if the industry is established on a sound basis these chemicals are likely to be manufactured in India.

7. *Labour.*—India is a country which exports labour—and as such is never likely to be in difficulty to secure labour, either skilled or unskilled required for this industry. There is also a good number of experts in this industry who have either got their training in foreign countries or are trained locally under foreign experts. There is again so much of unemployment for both the skilled and unskilled labour that industries like the match

industry which are so simple should be developed to lessen and ultimately to remove unemployment.

8. *Market.*—India has a vast demand for this commodity which is an everyday necessity of life that the yearly requirements of this country amount to 1,700,000 gross of matches per year. The figures of imports for British India alone for the year 1917-18 show the demand to be 17,000,000 gross. There is every possibility of this demand of 17,000,000 gross being increased in view of the fact that a portion of the agricultural class cannot at present afford the luxury of the matches and have still to resort to the primitive method of ignition by the help of steel and granite. My Committee have been pressing for a Committee of inquiry regarding the deflection of trade from Bombay. This problem affects the match industry to a very large extent. Quantities of foreign matches are sold in Ahmedabad and other places at Rs. 1-14-0 when the present duty is Rs. 1-8-0. Without going into details with regard to such conditions, my Committee will again press here for a thorough and searching enquiry into the situation.

9. *Competition.*—The chief competition comes from Sweden and naturally Sweden is much more concerned in the development of this Industry in India. Unfortunately India is a land open to all countries of the world to be explored and there are no measures to prevent any foreign country from exploiting the resources of this country by opening up factories here and thus depriving Indians of the natural advantages that may perhaps accrue out of certain measures which act as protective to any industry. The Tariff Board are probably aware that one of the effects of the import duty of Rs. 1-8-0 per gross has been the opening of match factories by influential Swedish Syndicates in order to take undue advantage of this duty to compete with. My Committee do not desire to go into the details of this powerful Syndicate as the same seems to have been done by bodies more in the know of its doings and directly affected by them, but they would like to impress upon the Board the desirability of instituting a thorough enquiry into the intentions and doings of this Syndicate and the result thereof on the development of the Indian Match Industry. This they believe will form a definite part of their inquiry.

10. *Claim for protection.*—My Committee are conversant with the conditions laid down by the Fiscal Commission to be satisfied by industries claiming protection. They are of opinion that there is a sufficiency of the supply of the chief materials required for this industry, namely, soft wood, if proper researches are seriously taken in hand by Government to find out soft wood suitable for the manufacture of matches. Besides, power is not a main consideration in this industry as most of the work can be done by manual labour and is being done at present in most of the factories that are established in India. Whatever power that is required is also available at moderate charge. The question of the supply of labour will not worry the promoter of this industry as labour is abundant in India.

11. My Committee have reasons to believe that unless sufficient protection for sometime is afforded to this industry, it is not likely to develop. But if it is at all developed under the fostering care of the Government it will soon be in a position to face the world competition without the necessity of protective duty. My Committee also wish to impress upon the Board the fact that during the Great War not only the prices of matches had gone up a great deal but there was felt a great scarcity and had it not been for the Japanese import what would have been the position in the country could better be imagined than described. They also believe that had it not been for the Indian factories recently growing up, the prices would have been much more than those that are at present ruling for this bare necessity of life and they trust that the Board will seriously consider the future position of the country in this respect.

12. It is also a well-known fact that India has been dependent upon foreign imports of matches all these years but the position has never been so serious as at present, when a strong syndicate has been formed with an enormous capital to control the industry and to make enormous profits by

acquiring factories manufacturing matches in certain parts of Europe and in Japan, the only sources from where matches used to be imported heretofore; even the machinery works and chemical works which manufacture machinery and chemicals for match industry are being taken over by this syndicate in their control in order to preserve their monopoly.

13. The activities of this Syndicate in India are all for the purpose of promoting the interests of the Syndicate that is to get as much of their produce as possible into India, and to capture the Indian markets entirely for themselves, so that ultimately they can sell their products as they like; it is impossible to believe that this Syndicate with this aim, object and activity has established some factories in India with the intention of encouraging this industry in India and therefore, it is hoped that India will not be left to its mercy for a bare necessity of life. My Committee are also of opinion that encouragement to this industry will also be a help to the chemical and paper industries in India and will, while giving employment to thousands, develop forests and cause increase in forest revenues of the Government as also in the revenues of the Railways.

14. My Committee are, therefore, of opinion that the present duty of Rs. 1-8-0 per gross should be maintained. Anything less than this will jeopardise the whole fabric of this industry and once it is pulled down, it will be very difficult for the industry to raise its head again. The reasons for the maintenance of this duty are manifold; the chief amongst them being, the industry being in the hands of a very strong syndicate out to control the world's output and demand, the raw materials that are being imported in India for the manufacture of matches are sold at the maximum rate thereby already penalising the Indian concerns for their attempt to compete with the foreign ones.

15. One of the effects of the protective duty will be that a few new factories will be opened in India by foreign capital; such an advantage has already been taken by the Swedish Syndicate in opening up factories at Amarnath near Bombay, Rangoon and Calcutta and their object being necessarily detrimental to the interests of the development of the Indian Industry can only be checked by an imposition of an excise duty on the produce of factories under the control of foreign concerns in proportion to the capital invested by them. Such an excise duty will put a check to the mischievous activities of foreign trusts out to undermine this industry by dumping their produce on the Indian market. There is another form of indirect assistance which my Committee would like to suggest and it is transport facilities by rail and steam for the finished goods of Indian factories to the different parts of India.

**THE INDIAN MERCHANTS' CHAMBER, BOMBAY.
INDIAN CHAMBER OF COMMERCE, CALCUTTA.**

Oral Evidence of Messrs. WALCHAND, HEERACHAND, ANANDJI HARIDAS, HOSSEINBHOY LALJI, M.L.C., J. K. MEHTA, M. N. MEHTA and M. P. GANDHI, recorded at Calcutta on Monday, the 13th February 1928.

Introductory.

President.—Mr. Walchand, you are appearing for the Indian Merchants' Chamber, Bombay?

Mr. Walchand.—Yes.

President.—Mr. Husseinbhoi Lalji, whom are you representing?

Mr. Lalji.—I am appearing on behalf of the Indian Merchants' Chamber, Bombay, with Mr. Walchand.

President.—Mr. Mehta?

Mr. Mehta.—I am also appearing on behalf of the Indian Merchants' Chamber.

President.—Are you the Secretary of the Chamber?

Mr. Mehta.—Yes.

President.—Mr. Anandji, you are representing the Indian Chamber of Commerce, Calcutta?

Mr. Anandji.—Yes. Mr. Mehta and Mr. Gandhi are also representing this Chamber with me.

Mr. Walchand.—Before you begin, I may tell you that the Indian Merchants' Chamber, Bombay, has discussed the points raised in your circular letter with the Indian Chamber of Commerce, Calcutta, and we are more or less agreed. We are generally unanimous on almost all the points. You will find from both the statements that except in a few details we are more or less agreed.

President.—The most convenient way of conducting the examination will be for me to put my questions to you and if the Calcutta representatives wish to add to or to qualify your replies they can do so.

Mr. Walchand.—That is the idea of my making a statement that we are more or less agreed.

Dr. Matthai.—Is the Match Manufacturers' Association, Bombay, represented here?

Mr. Lalji.—No.

President.—I should like to draw the attention of all the Chambers which have written to us to the fact that there is a certain amount of misunderstanding as to the circular letter issued by us. Some of them have assumed that the opinions expressed therein were our opinions. That is not so. We have tried to make it perfectly clear that we were not expressing any opinion but that we were putting forward the arguments of those who came before us. We have to come to certain conclusions and we want to be enlightened on the various points by the commercial community both European and Indian. It is a pity that some of the Chambers have misunderstood some of the ideas contained in our letter. We expressed no opinion whatsoever on any of the points raised because we have not yet explored the subject sufficiently to form any opinion and it is not our practice to express any opinion except in our reports.

Mr. Walchand.—We have understood the position correctly.

President.—In answering our questions you will remember that that is the idea we have in mind.

Mr. Walchand.—We have understood the position correctly and we must thank the Board for putting before us the various alternatives, I should say illustrations.

President.—We are indeed very much obliged to the Indian commercial community for going through our communication so very carefully and giving us their considered opinion which, I am sure, will be of very great assistance to us. Unfortunately we have not had much time to give publicity to all the representations that we have received from the various Chambers of Commerce, but the one impression that is created in my mind is that there is a complete cleavage of opinion on some of the most important points. So far as Indian opinion is concerned, as far as I can gather, they think that the Swedish Match Company is not desirable and that certain conditions must be imposed on it if it is to remain in the country. On the other hand, the European opinion is that it may be a benefit to the country and that it should be allowed to remain. I am just putting it generally.

Mr. Walchand.—We have not seen the opinion of any European Chamber.

President.—I am sorry, but we had no time to give publicity to these representations. But between these two I think we should try to arrive at some decision which is based not on any sentiment necessarily, but purely on more or less economic grounds.

Mr. Walchand.—Probably the European Chambers were waiting to see what the Indian Chambers had to say, but as the representations of the Indian Chambers were made public whilst theirs were not, we do not know what their views are.

Dr. Matthai.—There was one chamber who had their communication published in the papers, and that was the Burma Chamber of Commerce, but it was a short one.

Mr. Gandhi.—That was only a brief one about ten or twelve lines.

Mr. Walchand.—Neither the Bombay European Chamber nor the Calcutta Chamber have had their communication to the Board published.

President.—The Bengal Chamber of Commerce, the Bombay Chamber of Commerce and also the Upper India Chamber of Commerce are rather important bodies and they have expressed their views to us.

Mr. Anandji.—I may say our opposition to the Swedish Trust is not based on any sentiment but purely on economic grounds.

President.—I am glad to hear that. But there is a feeling abroad that the question might be dealt with not on economic grounds but on other grounds and we should be very averse to create that impression, so that in giving evidence you will bear this in mind that we are concerned chiefly with the economic aspect of the question when we go through these various points.

Mr. Walchand.—May I summarize the statements which probably have not been very logically or consequentially drawn up?

President.—Yes, if you would like to do so. But I think it would be better if we go through the main points.

Mr. Walchand.—Just as you like.

The activities of the Swedish Match Company.

President.—There are two important things to enquire into. The first is, what is the objection from the economic point of view to the operations of the Swedish Match Company in the country, and secondly, if it is found that the Company's activities are undesirable, then what remedies do you suggest to counteract them? I think those two points would very nearly cover the most important issues as far as the Swedish Match Company are concerned.

Mr. Walchand.—Yes. We have tried through the proposed sales organization to deal with the Swedish menace.

President.—The sales organization is really a part of the remedy proposed.

Mr. Walchand.—Yes.

President.—The first thing is to find out in what way the Company operates and in what way you consider it prejudicial to the economic interest of India and, secondly, what remedies you propose. I want to know in what respects you consider that the operations of the Company are against the economic interest of the country? What is the main ground on which you base your opinion?

Mr. Walchand.—Personally, I should think the obvious ground is exploitation by non-nationals or non-Indians.

President.—Exploitation does not mean anything. That is an expression which at least so far as we are concerned, we have never used and we do not know what that means. The first thing you have got to show is this, that there is a Trust. Well, I concede that it is a Trust in the sense that it is a big organization, doing business on a very large scale in different parts of the world and so on.

Mr. Lalji.—And monopolizing this business.

President.—The second point is, does the Company act injuriously from the Indian economic point of view? How do you propose to establish that point?

Mr. Walchand.—Need we go into the usual grounds against monopolistic tendencies? Everywhere in the world once a Trust gets a monopoly it takes advantage of the consumer's position.

President.—If you put it on abstract grounds, I don't think there can be any dispute that if there is a monopoly and if the organisation possessing the monopoly takes advantage of its position unfairly and raises the price of the commodity to the consumer, then of course it is time for the State to consider whether any steps should be taken. But we have not got to that stage yet, so far as the evidence goes to show. We just want to see in what way you suggest that the Swedish Match Company has raised the prices. The evidence at present is—rather the allegation is—that they have lowered the prices.

Mr. Walchand.—That naturally is the initial stage. When they want to squeeze out the Indians from the business the tendency for this monopoly will be to lower the prices. We have the examples of the cement combine and the jute monopoly. By curtailing supplies and working 4 days instead of 6 days they have raised their prices. The cement combine has raised cement prices. Each of them is making about 50 per cent. on their turn over. They have done this although there are half a dozen different cement manufacturers in the country.

President.—Quite true, but I have never heard anybody suggest that Government should take any action as regards any of these industries.

Mr. Walchand.—Because of what?

President.—Their answer is that overproduction is uneconomic and therefore it is better for the consumer as well as the producer to bring production more or less into line with the demand.

Mr. Walchand.—Most of them are Indian concerns with rupee capital, managed in India not run by foreign people. Possibly some of them have to be tolerated because they have vested interests lasting over 50 or 60 years. The Swedish combine started only recently, three years back, because of this Rs. 1-8-0 duty, in order to take advantage of this duty. Their antecedents, their history in other parts of the world show that they have squeezed out the local industry of the country where they operate. The recent example is Ceylon. I was there last month. They have done the same there. They have squeezed out the local manufacturer by all means of competition, rate war, buying out their factories and so on.

Dr. Matthai.—Have they got their factories in Ceylon?

Mr. Walchand.—Yes, they have. They have taken over one work there and are probably running it in the name of the old company. They have a monopoly in Ceylon and in Japan I hear they control about 75 per cent.

President.—We are getting away from the point. On abstract grounds we may concede that if these things happen there would be some reason for taking action. But have all these things arisen? That is what we are trying to investigate.

Dr. Matthai.—You have mentioned the analogy of jute. Would you as a businessman of experience object to an industry which is passing through a period of depression taking steps to organize a proper relation between supply and demand? At the time when the Jute industry found it necessary to organize itself on the present short time basis, the jute industry, like most other industries, was for the time being passing through a period of depression, and a restriction of output was necessary in the interests of the industry.

Mr. Walchand.—Is there not a limit to it? Yesterday we had two reports of two jute mills which have declared 80 per cent. and 140 per cent. dividend. Even on their present replacement value some of them show a return of 15 to 20 per cent.

Dr. Matthai.—The situation would perhaps right itself. Supposing the profits that you get in the industry are sufficiently attractive for extension of production, the short time arrangement won't work.

Mr. Walchand.—For the last three years they have successfully kept outsiders from coming in.

Dr. Matthai.—The point on which we really need your assistance is this. So far judging by your experience of the Swedish Match Trust in India, is it possible for you to give us some instances of unfair competition by the Company?

Mr. Lalji.—I will only confine myself to the match industry. First of all it will be conceded that this is a very big Trust.

President.—That is conceded.

Mr. Lalji.—If that is conceded, what is their object? Their object has been to capture the world's trade in matches. That is a big Trust out to capture the world trade and every Trust that goes out to capture world trade has to consider in the first instance the question of buying out or running down small factories that are existing in any part of the world. With regard to this Swedish Trust, these people have got their factories all over the world. They were dependent on import trade in India and as soon as this Rs. 1-8-0 duty was levied they put up factories in India and in the very beginning they started their sales as we have pointed out, at Rs. 1-14-0 per gross. Now the price has come down to Rs. 1-4-0.

President.—I am sorry to interrupt you. When they started with Rs. 1-14-0 that price of Rs. 1-14-0 was very high with reference to the cost.

Mr. Lalji.—Quite right.

President.—There is one thing which the manufacturers have not so far grasped. It has been alleged against them that they have cut down prices. Their case, however, is this,—I express no opinion on that at present—that every time they have made a reduction in price the reduction has nearly corresponded to reduction in their costs, and that there is no time at which they have sold their matches at a loss, loss in the sense that they don't cover works cost *plus* a certain amount.

Mr. Lalji.—May I take it that they contend that when they were selling at Rs. 1-14-0 their costs were at that level and that their costs have come down to the figure they now give, namely, Rs. 1-2-0.

President.—That is their case.

Mr. Lalji.—If that is their case that is a point on which I want to say very strongly. So far as Indian factories are concerned, this plea would hold good because in the beginning they had no experience, they were importing splints and boxes and their costs used to be something very near the price at which they were selling. At that time of course there was good profit as well. But for a syndicate which had experience of 100 years, to start with 150 per

cent. more cost with all their efficiency, modern machinery, etc., is a thing which I cannot conceive.

President.—As a Board could we say that when they reduce their price to the consumer by producing matches cheaply, they do a disservice to the country?

Mr. Anandji.—It was because of the competition of Indian factories that their action appeared beneficial. If there had not been Indian factories in existence they would have taken advantage of the position and made as much money as they could out of the country.

President.—We are not now discussing any abstract proposition.

Mr. Anandji.—This is a fact and not any abstract question. If there had not been this competition from Indian factories, their prices would not have come down to the level to which they have come now. It is only human to make as much profit as one can get. There is nothing abstract about it.

Mr. Mathias.—On this question of monopoly may I quote from the report of the American Industrial Commission as to whether a monopoly if it is established will always fix higher prices to the consumer—

“The testimony of substantially all of the construction men is to the effect that unless a combination has some monopoly of the raw material or is protected by patent or possibly has succeeded in developing some very popular style of trade mark or brand, any attempt to put prices at above competition rates will result eventually in failure although it may be temporarily successful.”

Accepting this for the moment it does not appear that even if the Swedish Match Company obtained a monopoly they would put their prices very high.

Mr. Walchand.—I don't think American conditions will apply to us.

Mr. Lalji.—When their price was Rs. 1-14-0 and the price of the Indian manufacturers was about the same, at that time the Indian manufacturers had to import splints and veneers. You will find from the records that even at that time the Swedish Match Company were getting Indian wood from the Bombay forests and other forests and at that time their cost was...

Dr. Matthai.—What is the period you are referring to?

Mr. Lalji.—1924 and 1925. At that time they kept their prices at a level which would not give Indian factories good profit and they started with the proposal of buying out Indian factories. Then as the Indian factories started making their own boxes in India, they reduced their prices and after that the Swedish again reduced their prices to cut down the Indian manufacturers. Furthermore, since the Indian factories also started making splints and brought down their costs, they also started cutting their rates. This clearly shows that they have been watching the progress and the costs of the Indian factories and not allowing them a fair margin but are trying to compete with them and ultimately if this policy goes on they can cut them down altogether, because they have money.

No evidence of unfair competition.

President.—We don't want to get too far away from the point. First of all we must find out whether they were carrying on any unfair competition.

Mr. Walchand.—Even if there are no concrete instances I say they are just spreading out their net. They have not got their monopoly yet as the shipping trade has got. As soon as they get it, this is the result which will naturally follow.

President.—True, but we will deal with the abstract proposition afterwards, let us now deal with the present situation.

Mr. Walchand.—May I submit that this is not an abstract proposition; this is what has happened and this is what will happen.

President.—There is another point too. I do not know what the position will be found to be by us, but just now the position is this. They are trying to establish this proposition that their reduction in price has corresponded to

their reduction in costs. The second point is this. I think I put to Mr. Hosseinbhoj Lalji some question in Bombay and said that there were not many big manufacturers who had reached a stage when they did not find it profitable.

Mr. Lalji.—Yes.

President.—Up till now so far as profits are concerned have you any reason to complain? They are in fact higher than the rates which under any scheme of protection you would get.

Mr. Lalji.—Yes. But the question of questions is this. We want to protect ourselves and take action before we are ruined. This is a very small industry which is still in its infancy and we have to find out how we can protect it against this big combine which wants to crush us out of existence. We have raised this cry in order that action may be taken immediately before it is too late.

Mr. Anandji.—Just as they have brought down their costs so have the Indian manufacturers. It may be that the Swedish Trust have brought down their price because of the Indian competition. Instead of saying that the Indian manufacturers have brought down their cost you might just as well say that the Swedish Trust have done so and that has brought down the cost of the Indian manufacturers also and therefore the case being the same with regard to both the question to be considered is what will happen in the future.

President.—The position seems to be this, that so far the prices have been reduced by competition whether they took the first step or you took the first step is immaterial. Prices have been reduced but prices have so far not been reduced below a point at which they have ceased to be profitable.

Mr. Anandji.—I do admit that.

President.—Supposing the position does not become any worse, then will the Indian manufacturers have any serious reason to complain?

Mr. Lalji.—Supposing the position did not get any worse then they would not have any reason to complain, but you have to consider this. Do you believe for a moment that the prices will continue as they are?

President.—We want to discuss that point. Are you agreed that up to the present stage on economic grounds it has not been established that the Indian industry has been damaged?

Mr. Anandji.—The Indian industry would have expanded more but for the activities of the Swedish Trust.

President.—I am just asking you as regards the position of the industry as it stands to-day.

Mr. Anandji.—The factories in existence have not been hit thereby, but new factories could not come into existence.

Mr. Lalji.—Some had to shut down in the meantime.

President.—We will come to the new factories presently.

Mr. Walchand.—My objection extends even to that portion of the business which they have got and which is in non-Indian hands. I want the industry to be entirely run as far as possible by Indians as such.

President.—We will come to that presently.

Mr. Walchand.—That objection is there.

President.—That is different from what we are discussing now.

Dr. Matthai.—We are just now on the question of unfair competition.

Mr. Lalji.—At present the industry is also being hampered, and certain factories have reduced their production and certain factories have closed down, and why? The reason is quite clear, that they had certain stocks and they could not get finance to the extent that the Swedish Syndicate was financing the dealers in more ways than one, by giving them credit and giving them deferred rebates. If these deferred rebates are taken into considera-

tion, then I submit that even at the present moment certain factories which have not developed can never run.

Dr. Matthai.—On that question take your own factory which is one of the biggest in Bombay.

Mr. Lalji.—Fairly big.

Dr. Matthai.—On account of the activities of the Swedish Match Trust although your prices have come down, your prices have not come down to what might be called an uneconomic level.

Mr. Lalji.—I admit that.

Dr. Matthai.—My point is this, that there are certain factories in this country which have been pursuing exceedingly inefficient methods. For them it is necessary that there should be a very high level of prices. Otherwise they close down. Surely you are not going to suggest that the fact that a few concerns have closed down because their costs have been unduly high is any argument for proving unfair competition.

Mr. Lalji.—I admit that so far as my factory is concerned I had two years life and probably I was fortunate enough to have sufficient amount of finance, but our objective is that this industry should flourish and that those who have started and have not got sufficient funds should be given time to develop.

President.—Mr. Lalji, I think you have made a statement that some factories have closed down. We have been trying to ascertain whether that is a fact or not. We have not been able to find that any factories operating on any considerable scale have closed down. On the contrary most of the factories have increased their production.

Mr. Lalji.—I shall submit to you the names. I am making a difference between well organized factories and those who are in their infancy. The National Match Factory at Ghatkopar whose production is 8 to 9 cases of 100 gross each remained closed for about six months in the year.

President.—When did it start?

Mr. Lalji.—In 1924.

President.—It was working when we were there last year.

Mr. Lalji.—It has just then re-started. It has stopped again because nobody would advance them money. I will give you another instance. There was a factory called the Asada factory at Kurla and it has been recently removed. It was producing about 1,500 gross a day.

President.—Was that not a purely Japanese concern?

Mr. Lalji.—No. It has got an Indian partner.

Mr. Mathias.—That has been removed from Kurla?

Mr. Lalji.—Yes, but why has that been removed? To-morrow we may have to remove to an Indian State where we can have some protection but we want to remain in British India.

President.—So far as prices are concerned I think we are agreed that they are not at a level where they cease to be profitable and therefore factories which have closed down must have done so for other reasons such as want of finance, want of management, want of interest and so on. That is not necessarily connected with the price.

Mr. Anandji.—The future of the industry is a very considerable factor. After all if the future is bad nobody would be prepared to invest money in it, but if the future of the industry is assured they can get money easily and run the industry on an economic basis.

Dr. Matthai.—Even if these factories which closed down were inefficient, the mere fact that a certain number of factories had closed down might upset the confidence of the investors in the industry generally? Is that your point?

Mr. Lalji.—Yes.

Mr. Anandji.—They had to close down because there is the Swedish Trust with their big factory at Ambarnath and people were afraid of investing money in the match industry.

President.—So far the consequences have not been very serious, but if this Trust is allowed to continue then your case is that that the Indian part of the industry will come to grief?

Mr. Lalji.—Yes.

Mr. Walchand.—We don't admit that in the past they have not done anything to squeeze out or threaten the Indian industry or have not adopted methods to get rid of the Indian industry.

Mr. Lalji.—As you know there were affidavits from well-known people in which they said that attempts were made to buy their factories and threats were put forward that if they did not close down or hand over 51 per cent. interest in the factories there would be a rate war. You have the evidence of the merchants also who were not connected with factories in Bombay, like Sheikh Adam, and Mr. Lalloobhai. They are wholesale dealers and they have said that they were given the impression that the Swedish Trust was going to cut down the rates and stop the Indian sales. That is independent evidence.

President.—As regards threats they have denied these threats.

Mr. Walchand.—Let us not use the word threat. It might be that they used persuasive, sweet language, conveying the same meaning.

President.—It has been admitted by them that they have attempted to buy out these factories.

Mr. Walchand.—They have attempted to squeeze us out or to use your words to buy out small Indian industries.

President.—They have attempted to purchase some of the factories as going concerns. That is their case.

Mr. Walchand.—We don't admit that they have not made any attempts in the past to get a monopoly. Our case is that some of the means—I am not speaking from first hand information—might be unfair, they might be threats, they might be the usual methods adopted by monopolists in every other trade such as deferred rebates and so on.

Mr. Lalji.—You had some evidence from merchants who were not manufacturers.

President.—We have had plenty of evidence

Mr. Lalji.—I mean from merchants who are not manufacturers.

President.—They were interested in the sales; that comes to the same thing really.

Mr. Lalji.—They are selling Ambarnath matches as well as ours.

President.—We have not had any disinterested evidence.

Mr. Lalji.—What I wanted to convey was that independent merchants had given independent evidence.

President.—I don't dispute for a moment that a man may be interested and yet may be very independent. When you say that they are persons who were not interested I tell you that every person who came here before us was personally interested except of course the Chambers of Commerce.

Mr. Lalji.—Two big firms who gave evidence did not want to come of their own accord. I gave you their names and they came at your request.

President.—What is the point?

Mr. Lalji.—What I want to say is that they were independent and they told you that the object of the Swedish Match Company was either to buy out the Indian concerns or reduce their rates and thus compel them to close down.

President.—They denied that, and I don't think it is necessary for our purpose to go into that.

Mr. Anandji.—They made offers to persons who owned factories.

President.—As a matter of fact they did try to purchase these factories; they wanted to acquire at least 51 per cent. interest. Is not that sufficient for your purpose? Now, let us get on to the next point. Your case is that if they are allowed to continue, the Indian industry may have to face such fierce competition from them that the Indian factories will be destroyed. That is your case, is it not?

Mr. Walchand.—Yes.

President.—That being the position, you have certain proposals to make as to how to meet this?

Mr. Walchand.—Yes.

President.—Now as regards the foreign character of the company, we have published the earlier evidence that we took in this enquiry and you will find that there are documents in those two volumes which set out the history of the Company, its capital, where the capital originated and so on. You will find from those documents that the bulk of its capital has been raised in England, in London—at least a very large percentage—though the company has its domicile in Sweden. The Swedish capital is very small. Most of the capital has been subscribed by Great Britain. Further, they have, so far as India is concerned, a rupee capital. The Western India Match Company is a rupee capital company.

Mr. Walchand.—It is a private limited company.

President.—But with a rupee capital. Again, the Assam Match Company is a public company with rupee capital. They have offered shares to the Indian public. First of all, let us deal with the non-Indian part of the capital. It has, as I say, a very large percentage of British capital. What do you suggest when you say that foreign capital ought to be controlled? Do you mean foreign in the sense that it is non-Indian?

Mr. Walchand.—Even British capital is foreign capital.

President.—It is non-Indian external capital that you object to?

Mr. Anandji.—Yes.

Mr. Walchand.—If a war breaks out with Sweden, what happens?

President.—We should be very rich. We would take hold of all their factories?

Mr. Walchand.—You mean confiscate them and sell all their matches as Soviet oil is sold.

Mr. Lalji.—Are you agreed that we can manufacture without the assistance of these Swedish experts?

President.—Aren't you manufacturing without them?

Mr. Lalji.—We are.

Mr. Anandji.—If we are killed now as a result of the operations of the Swedish Match Company in India, it will take years before we shall be again fit to run this match industry.

Mr. Walchand.—Our main objection is this. Even if the bulk of the capital is British, we consider all that capital as foreign.

Regulation of foreign capital.

Dr. Matthai.—We are now on the question of foreign capital and I should like to know your position precisely. First, let us make a distinction between proprietary and non-proprietary capital. Supposing you are in a position to run an industry with the aid of foreign capital that has come on a non-proprietary basis—debentures and so on—you would not object, would you? Your objection, I take it, primarily arises from the fact that the possession of capital means also possession of control?

Mr. Walchand.—Yes.

Dr. Matthai.—Therefore to non-proprietary capital, you would not object.

Mr. Walchand.—To capital coming into the country in the form of debentures, I don't object.

Mr. Lalji.—We would not object to foreign capital coming in, provided the shares are held by Indians.

Dr. Matthai.—Secondly, your objection to proprietary capital arises where the use of that capital is connected either with a monopoly or with an anticipated monopoly.

Mr. Walchand.—Not merely that!

Dr. Matthai.—Where the business is financed by foreign proprietary capital but it functions on a basis of perfectly free and open competition, would you object?

Mr. Walchand.—It comes in even there. My objection is to all foreign, non-Indian capital.

President.—How is it then that in one part of your note you say your Committee are not opposed to any foreign capital as such but it must come on terms laid down by the Indian Legislative Assembly?

Mr. Walchand.—Yes, provided it comes in the form of debenture capital. The shares must belong to Indians.

President.—You are entitled to raise this question if you like and of course, we will consider it, but I must tell you that this point has been twice considered already.

Mr. Walchand.—By whom?

President.—Once by the Fiscal Commission and once by the External Capital Committee.

Mr. Anandji.—The External Capital Committee are not quite clear.

Mr. Walchand.—In the report of the Fiscal Commission, there are two opinions.

President.—When we talk of a Commission, we always talk of the majority report; that is the ordinary convention. The fact remains that both the Fiscal Commission and the External Capital Committee reported that we could not put any restrictions on foreign capital without injuring the economic interests of India except under one condition; that is to say, where the foreign capitalist has got some special benefit from Government, such as a bounty or a concession or a monopoly or some such thing, they thought that in accordance with the views of the Fiscal Commission certain limitations might be placed upon the investment of foreign capital in the country. But this is clearly not a case in which they have got any concession other than the ordinary one that they are allowed to trade in the country on the same terms as anyone else.

Mr. Walchand.—Is not the present import duty of Rs. 1-8-0 a concession?

President.—It is not a concession to them.

Dr. Matthai.—It is not a concession to them. Once you have a duty, it applies to the just as well as the unjust. You cannot differentiate as you can in the case of bounties.

Mr. Walchand.—Personally I should consider Rs. 1-8-0 duty a big concession.

President.—I am trying to point out what has been done before.

Mr. Walchand.—The settled policy of the Government is I think what was mentioned by Mr. (now Sir) A. C. Chatterjee in the Legislative Assembly on the 2nd March 1922: "The settled policy of the Government of India, as I think we have mentioned more than once in this Assembly, is that no concession should be given to any firms in regard to industries in India, unless such firms have a rupee capital, unless such firms have a proportion, at any rate, of Indian directors, and unless such firms allow facilities for Indian apprentices to be trained in their works." As I say the duty of Rs. 1-8-0 is a big concession.

Mr. Mehta.—It is the view of the minority of the Fiscal Commission that a protective wall is a big concession.

President.—They don't want the concession; they say "take it away". It is not a concession to a foreign concern.

Mr. Anandji.—It is a concession in this way that any company which starts manufacturing in this country will get the benefit of this duty.

President.—It is not a concession in the sense in which the Fiscal Commission meant it.

Mr. Walchand.—This is what the minority of the Fiscal say in their minute of dissent: "We are unable to appreciate the distinction drawn between companies getting Government concession and companies establishing themselves behind the tariff wall erected under a policy of protection". The duty of Rs. 1-8-0 is really a big tariff wall.

Mr. Mathias.—Yes, when it becomes a protective duty.

Mr. Walchand.—For 50 years the industry has been struggling in the country. The minute the duty of Rs. 1-8-0 is imposed we find that the industry has been able to secure a footing and produce about 65 per cent. of the country's requirements of which more than 33 per cent. is entirely Indian. If that cannot be called due to protection, what else is it due to?

President.—As far as their policy can be ascertained from what they have done in other countries, it is that they would comply with all the conditions laid down by you here except the one relating to 75 per cent. of the capital being held by Indians.

Mr. Walchand.—That is the main thing.

President.—You insist upon 75 per cent. of the capital being Indian?

Mr. Walchand.—Yes.

President.—I would advise you to read once more the report of the External Capital Committee. It is an ideal to be aimed at but it is an ideal which cannot be given effect to without injuring all investors in the country.

Mr. Walchand.—In this country?

President.—Yes, because people will not invest in an industry where they cannot part with their shares in the open market under competitive conditions.

Mr. Walchand.—Cannot the 75 per cent. give scope for free, open market?

President.—Supposing the industry comes to grief, a non-Indian investor may be prepared to pay a higher price for the shares, but if he is not allowed to buy in the open market the Indian investor will have to sell for whatever price he can. That will be the position.

Mr. Gandhi.—Is India not big enough to afford scope for open competition?

Dr. Matthai.—It depends entirely upon the conditions of the industry at the time.

Mr. Gandhi.—I don't think the market will be at all affected.

President.—This is the position. The recommendation as regards the percentage of capital was considered by two committees and it was their view that this could not be enforced.

Mr. Walchand.—What we want is a predominant majority—call it 75, 66, 70 or something of that sort. As we understand it, that majority should be held in their own right not only in the original holding but also later on throughout by Indians on their own behalf, not as dummies.

President.—We live in a country in which *benami* exists in perfection!

Mr. Walchand.—We will find out if it is *benami*.

Dr. Matthai.—It will simply mean an inquisitorial enquiry.

Mr. Walchand.—The share registers and the accounts will have to come before the sales organization at the end of a certain period and at that time the complete balance sheet and the share registers will reveal whether the shares are held *bonâ fide* or by a clerk or by an agent of the Swedish Match Company, *benami*.

Dr. Matthai.—What is the position under your scheme of a company registered in India? Supposing shares were held by a company or a corporation which is registered in India would you call that an Indian shareholder?

Mr. Walchand.—We would have go into the share registers of that company.

President.—How can you do that? Take the case of the Tata Iron and Steel Company. It wants its reserves invested in the Swedish Match Company; it buys a very large proportion of its shares. How are you going to know whether the shares of the Tata Iron and Steel Company are Indian or not?

Mr. Walchand.—The share registers can be inspected by the Registrar of Joint Stock Companies or by any one at his office. When I see a share in the name of a company instead of an individual I will say.

President.—Who will say?

Mr. Walchand.—The Tariff Board or the sales organization or whoever gives the licence and fixes the quota and the prices. That is our scheme. Under our scheme there should be a licensing system.

President.—We are first dealing with the constitution of the Swedish Match Company.

Mr. Walchand.—It is this organization which will look into that.

President.—What I want to get at is this. Is it at all practicable to carry on this very intricate enquiry at very frequent intervals?

Mr. Walchand.—I don't agree it will be frequent nor intricate. Six businessmen moving about with open eyes in the country will at once tell you whether a particular transaction is *bond fide* or not.

President.—Take a case like this. There are a number of private companies consisting of, say, one European member and two Indians. They are registered as a company. They go and buy shares in the Swedish Match Company. What control would you have over a private company?

Mr. Walchand.—There might be smugglers, but because of that we need not run away from the principle of our proposition.

Dr. Matthai.—If you look at it in relation to the facts of the industry you will find that a great majority of the Indian match concerns are partnership. What is really the position of a partnership? Supposing you have two men running a concern both of whom are nominees of the Swedish Trust, how are you going to deal with that?

Mr. Walchand.—Such facts cannot remain concealed. We can always find that out within a short time after the transaction. It will be credited somewhere in the books because the Swedish Company is not going to make a gift of its capital to these two men.

Dr. Matthai.—You might know enough for you to form a sort of general impression, but you might not know enough to substantiate the thing in a formal manner.

Mr. Walchand.—If they are so clever or shrewd as to elude the vigilance of these six gentlemen and the Government I for one will say that they are welcome to have that small concession.

Mr. Lalji.—It is an easy thing. If you ask ordinary bankers they will get this information themselves if you are a client. If bankers can get this information the non-official directors can also get it.

Dr. Matthai.—If as a banker I give you a loan it is simply a matter between you and me; but in the case of a public utility concern it is a matter of public interest.

Mr. Lalji.—Just as banks can get any information through their men so can the sales organization get the information because it will be a part of their duty.

Mr. Walchand.—The sales organization can ask their men to find that out. Last week we had a concrete example; a concealed partnership was revealed to us and we asked our bankers in confidence "will you please let us know all about this?". Their reply was a revelation because we never expected that these would be the gentlemen interested in the partnership.

The bank at once told us in confidence so and so formed the partnership and there were so many men in it.

President.—Were these gentlemen clients of the bank?

Mr. Walchand.—No. I asked my bankers about the partnership and they got us all the information through their bankers. They gave us all information relating to the partnership and the standing of the partners, their antecedents and so on in confidence.

President.—That is all right in business. You may get the information confidentially and say "I will not deal with you," but here you must remember that the enquiry must be public, the allegations must be proved and established and those people must be given an opportunity to show why the allegations should not be accepted. Is it possible for any public body to investigate thousands of cases every year? As soon as there is an alteration in the shareholders name or in the proportion they will have to enquire into it.

Mr. Walchand.—If it is suggested that the Swedish combine will entail thousands of enquiries because they may throw their money *benami* through clerks and their agents and so on—no respectable man would lend himself to that kind of thing—then I would rather get rid of the combine, the earlier the better.

President.—I don't say they are capable of that.

Mr. Walchand.—It is only a possibility or feasibility. If two Indians do that I have nothing to say. If Mr. Husseinbhoj Lalji, for instance, sells his shares *benami*, I have nothing to say. This is only with reference to the Swedish Trust.

President.—We are discussing a general principle. If we are to make this recommendation as regards the Swedish Match Company for the match industry only, we as a Tariff Board, must be careful in laying down a precedent like that.

Mr. Walchand.—I say that under the peculiar circumstances of this case in view of the Swedish combine, their methods, their past history in various other countries and the various allegations that are made against them, even assuming that they are not substantiated, I say such a proceeding should be followed.

Dr. Matthai.—The whole scheme that you have suggested with regard to the regulation of foreign capital is based on the fact that under present conditions the Match industry in India is, in your opinion, likely to become a monopolistic organization. It is because a monopoly is associated with the employment of foreign capital, that you object to foreign capital. If we are to make a special case of the Match industry it is because there is the possibility of monopoly associated with foreign capital, is it not?

Mr. Walchand.—Quite. It is the Swedish Combine that has raised the whole situation.

Mr. Anandji.—In the External Capital Committee's report they say "No feasible suggestions for such discrimination have been suggested to us nor have any occurred to us during our discussions". Here is a good case which is feasible and is for the good of the country. They could not come to any conclusion because of lack of definite concrete suggestions. Here is a case in point.

President.—The point is this. If a case was made out that there was this monopoly and that it was in the economic interest of India that it should not be allowed to be established, that is a different proposition. But apart from that you are asking us to make a proposal on the ground that you don't want this foreign capital to be invested in this industry except under the conditions laid down by you. That is a different state of affairs.

Mr. Anandji.—There is nothing sentimental about it. It is for the economic good of the country.

President.—Then we must be satisfied that the safeguards you propose are practicable.

Mr. Lalji.—There is one point. We have just been told that there is a large amount of English capital in this company. Is it in the shape of debentures or is it in the shape of original shares?

Dr. Matthai.—It is in the shape of share capital.

Mr. Lalji.—The External Capital Committee has suggested that the Indian investors may be protected by purchasing their debentures in foreign countries. But here I presume the shareholders being Swedish and the English portion of the capital being guaranteed 8 per cent. interest, that means debentures.

Dr. Matthai.—What they have done is to divide their shares into two classes, (A) and (B) shares. The (B) shares which are held outside Sweden carry reduced voting power, only one-fifth.

Mr. Walchand.—The control is in Sweden and that simplifies my contention that it is entirely alien or foreign.

President.—The ordinary capital has been raised in London.

Mr. Walchand.—Which has very little voting power.

President.—Yes, but it is ordinary share capital and not debenture capital.

Mr. Walchand.—We submit that in view of this definite case made out against the Swedish combine of their tendencies to monopolize—we have had in India bitter experience of the shipping monopoly and various other monopolies—we suggest that preventive measures should be taken to stop this combine from getting bigger and acquiring a greater vested interest.

President.—Supposing the Swedish Match Company combined with the Indian manufacturers, I understand the shipping companies are in conference to a certain extent...

Mr. Walchand.—Yes, if they want to exist. You will be astonished to hear to what extent the vested interest of the monopolies go. Lord Inchcape, an Empire builder, had the audacity to tell us, because we wanted a small portion of the Indian mercantile marine trade to be allowed to us—he told us as if we were culprits before a court—“It is you who attacked us. We are carrying on our business for so many years profitably and you fellows have no business to come and attack us”. This is what the vested interest told us and this is what the Swedish Trust is going to tell us, and that is why I say it is only 3 years now and it is time that we nip it in the bud.

President.—Supposing the Swedish Match Company combined with the Indian manufacturers and then formed a monopoly, then what proposal have you got to make? Supposing the Swedish Match Company say “we don’t want a monopoly we will stick to our business and you stick to yours and we two will combine and fix prices”, what have you got to say to that?

Mr. Walchand.—That is why I suggest licensing, quota, and sales organization to prevent consumers from being exploited or penalized by such a combination. We can foresee that and that is why we have suggested those remedies. The Swedish combine can well afford to buy out these small concerns: two or three lakhs or even a million would not affect them. Possibly they might do that. If they do that I have got this. We will say we will fix quotas and prices.

Mr. Anandji.—The Swedish combine should go out of the country in five years; that is the view of the Indian Chamber of Commerce, Calcutta.

President.—Your proposal is that they must be allowed to remain only for five years?

Mr. Anandji.—Yes.

President.—Do you think that they would care to remain for five years?

Mr. Walchand.—If they want to go out earlier, well and good! It will be a great relief to us.

President.—Would it not be simpler for Government to say “you clear out”? You make a proposition to them and say “you stay here for five years”. It means their total extinction after five years.

Mr. Walchand.—With my own Government I would have said that.

President.—When you have your own Government we may not be here! It is no use saying all that. The point is this that you want them to go.

Mr. Anandji.—Yes.

President.—It is no use asking them to take something which they can reject out of hand. Why should they remain here for five years and for whose benefit? Do you expect them to clear out of the country and leave their factories here, or what are they to do? Are they to lose the money that they invested in the business here?

Mr. Anandji.—That is why I say that the Swedish Match Trust should remain here for five years to sell their property, just to enable them to clear out as economically as they can. If they were asked to go away at once their loss would be heavy but if they were allowed to remain in the country for five years their loss would be very small.

President.—That would not enable them to get back their value.

Mr. Lalji.—There are buyers for their factories at present.

President.—You are asking Government to do that. In that case you want Government to confiscate their property without giving them any compensation, do you?

Mr. Lalji.—Government need not confiscate their property.

President.—That is what it comes to.

Mr. Walchand.—They might sell their factories and get the full value.

Dr. Matthai.—Your suggestion is that in the course of five years—the maximum is five years—they must be prepared to go but they have the option of going earlier if they want to. Is that your position?

Mr. Anandji.—Yes.

Dr. Matthai.—Five years is a period of notice to quit, is it not?

Mr. Walchand.—Yes. The Mercantile Marine Committee recommended a similar course, that the quota should be reduced at the rate of 5 per cent. every year on the basis that a ship will be out of commission in 20 years. It was based on a very equitable basis.

President.—Was it accepted by Government?

Mr. Walchand.—No. That is my difficulty.

President.—Would it be in the interest of the country for anybody, whether it is the Swedish Company or anybody else, to be told to clear out of the country on general grounds without any compensation?

Mr. Walchand.—Certainly it would be.

President.—Would it not come to the same thing as Soviet Russia did as regards oil?

Mr. Walchand.—If they want to come to my country and take advantage of the duty of Rs. 1-8-0, and drive out the children of the soil from their legitimate share of the trade, we say "gentlemen, you have made a mistake. You had better go out".

President.—This is rather begging the question. You say hereafter they may do that. Supposing they don't do that?

Mr. Walchand.—In the first place they have attempted to do it and I say they are quite capable of doing it. Their antecedents show that and I want to prevent that.

Mr. Anandji.—They have done that in Japan, and in Greece.

President.—There the Government has given them a monopoly.

Mr. Walchand.—Possibly the British Chamber will say "give them the monopoly". Greece had to do it.

President.—We are not discussing that. Do you consider it really in the interest of our country that any foreigner, it does not matter who he is, should leave the country under circumstances in which he feels that he has been unjustly treated?

Mr. Walchand.—Personally I don't think we are treating them unjustly.

President.—The point is that. At the time when they came here Government had put on this duty and that was open invitation to anybody to come and establish himself in the country.

Mr. Walchand.—Open invitation?

President.—When Government put on a revenue duty anybody was entitled to take advantage of it.

Mr. Walchand.—Quite, but at his own risk, with open eyes.

President.—Supposing it was established that the Indian match manufacturers combined and formed a monopoly, would the Government be justified in cancelling the licence and confiscating their property?

Mr. Walchand.—No, because that is a monopoly from my own people.

Mr. Anandji.—What is the ultimate test of the economic good of the country?

President.—Is the good of the country promoted by treating foreigners in this way?

Mr. Anandji.—Yes, when they are out to crush the Indian industry.

Dr. Matthai.—Supposing we were in a position to provide that the Swedish Match Trust in India would never acquire a position of monopoly in the industry, in that case do you want them entirely to go out?

Mr. Walchand.—Do you mean they restricted themselves to their present output?

Dr. Matthai.—Supposing it was possible to make some arrangement by which the Swedish Match Trust remained in the country but would not be able to establish a monopoly—let us say for argument's sake they are restricted to 25 per cent. of the total output and the rest is in indigenous hands—if that sort of arrangement was possible, would you want to eliminate them altogether?

Mr. Walchand.—The entire elimination I may point out, is the Calcutta Chamber's recommendation. We say we want them to form a rupee capital public limited liability company of which the shares are offered to the public, 75 per cent. of the capital being held by Indians.

Dr. Matthai.—What I want to know is this. Supposing they remained on their present basis, not with a rupee capital, but restricted to an output of 25 per cent. of the total consumption, in that case is it not to the interest of the consumer to keep them here?

Mr. Walchand.—No.

Dr. Matthai.—You are looking at the question entirely from the point of view of the Indian capitalist.

Mr. Walchand.—Also the ultimate interest of the consumer and the country. Possibly the consumer will have to go through a period of inefficient manufacture of matches but only for a short period. Protection always means that. But it is to the interest of the consumer and the country at large if the whole of the profits go to the nationals of the country.

Dr. Matthai.—How exactly would you meet this difficulty? Till the Swedish Trust started manufacturing matches here the price of matches had been extraordinarily high.

Mr. Walchand.—Even assuming your premise to be correct—I don't admit it is—the whole of the profit remained in the country.

Dr. Matthai.—You are thinking of the country entirely in terms of the capitalist. What I am asking you to remember is that the country is very largely composed of consumers.

Mr. Anandji.—Is not the producer also a consumer?

Mr. Walchand.—It is preferable to the profits leaving the shores of India. Even if that is unevenly distributed, it is better to have it in the pocket of

Mr. Lalji, for instance, than being more equally distributed and being in Lombard Street.

Dr. Matthai.—From the point of view of the manufacturer don't you think that the presence of a very efficient competitor as the Swedish Company, is of some advantage, provided the possibility of a monopoly is prevented?

Mr. Walchand.—No. I would rather pay a premium on efficiency to the Indian manufacturers and allow them to have healthy competition between themselves and gradually build up the industry than have this vested interest created and encouraged and given concessions. With a little suffering on the part of the consumer we are sure we shall be able to build up the industry.

Dr. Matthai.—Even if it were possible for us to restrict them to a limited output you would want them to be driven out.

Mr. Walchand.—Yes, if they refuse to comply with those requirements.

Dr. Matthai.—It comes to this, that in your opinion in every industry in the country there must be only Indian capital.

Mr. Walchand.—To the extent of 75 per cent. I am prepared to modify this to the extent that we must have a pre-dominant majority of the controlling interest both in capital and management of that industry in India.

Mr. Lalji.—Am I to take it that every industry in India—there are few industries in the country—that applies for protection will have to keep always in view that a foreign concern must remain to check its growth and make healthy competition? Is that the basis always to be laid down?

President.—We have so far never attached any importance to who is running the industry.

Mr. Walchand.—The primary object is to see whether it is run by Indians, owned by Indians, whether the country at large is benefited or whether the profits leave the country or not.

Mr. Anandji.—In this particular industry there is no difficulty to the consumer or to the country.

Dr. Matthai.—By difficulty what precisely do you mean?

Mr. Anandji.—There is only one foreign company and there is no long vested interest; the Indian manufacturers are efficient and are able to produce what you require, and so there is no difficulty in eliminating the foreign capitalist from this particular industry.

Mr. Walchand.—For protection it is an exceptionally good case. With this spasmodic protection by way of revenue duty which may be changed any minute we have shown that in three years we have been able to produce 33 per cent. by Indian capital and management and possibly in three more we would produce the whole of the country's requirements. The cement industry has shown us that. There, we have overtaken the demand. Similarly I think we will be able to do that in the Match industry. Here is an ideal case. If the Fiscal Commission's policy is to be followed, here is only one obstacle and that is the Swedish Match Trust; let us eliminate that. They have no business to be here. Eliminate it and in six years time we will have 100 per cent. of the country's demand manufactured by Indians.

President.—Then you may be in the position of the cement industry and ask us to enquire again.

Mr. Walchand.—In the cement industry they are making 50 per cent. profit.

Sales syndicate.

President.—What is your scheme? How do you propose to meet the monopoly. You propose the formation of a sales syndicate and you insist that it should be an Indian company with Indian capital?

Mr. Walchand.—Purely Indian.

President.—That company after it has been floated should have a board of directors?

Mr. Walchand.—Yes.

President.—And you propose that they should be all Indians?

Mr. Walchand.—Yes.

President.—At the same time you propose that the board shall contain representatives of the manufacturers.

Mr. Walchand.—Two representatives of the manufacturers, 4 representatives of the shareholders not interested directly or indirectly in the manufacture or distribution of matches, and 2 from the federation of Chambers who will also not be interested in the manufacture, and a representative of Government.

President.—Supposing the Swedish Match Company remained in India and complied with all the conditions, would they be entitled to representation or do you mean by manufacturers, manufacturers who are not foreigners?

Mr. Walchand.—We have said in our representation they will be all Indians. That automatically excludes the Swede, if he wants to be represented through a non-Indian. If the Swedish combine accepts our 75 per cent. scheme, they will have to have on their Board, enough Indian Directors to select from, to represent them on this sales organisation. But if they insist on having a non-Indian, they will have to go without representation.

President.—In that case they will have to depend entirely on the views of the Indian board of directors.

Mr. Walchand.—Yes.

President.—Supposing we made a recommendation that 75 per cent. of the capital should be owned by Indians and Government rejected it and the Swedish Match Company still remained in the country and a sales syndicate was formed, in that case could the Swedish Match Company be expected to accept the decisions of the Indian board of directors in the formation of which they had no say?

Mr. Walchand.—You mean if Government is going to turn down all our proposals?

President.—Not all, but only this one. Supposing they did not give effect to this proposal of yours and they said “the Swedish Company can remain here but we will allow a sales syndicate to be formed,” then do you think they will have sufficient confidence in the Indian board of directors?

Mr. Walchand.—It is not a question of their having any confidence. It is a question of India having confidence in the Swedish Companies *bonâ fides*.

President.—If you are the Government and if you had everything in your own hands the question might not arise but I am just pointing out the difficulties.

Mr. Walchand.—I could understand, with due respect to you, that there might be some sense in allowing a British company who are our self-appointed Trustees, but I cannot understand the case for the Swedish combine where the controlling interest is entirely Swedish.

President.—We have discussed that question long enough. The point arises, supposing a sales syndicate was formed and the Swedish Match Company was allowed to remain in the country, do you suggest that they should be entirely excluded from the directorate?

Mr. Walchand.—Our representation says that the whole of the directorate should be Indian and if there was 75 per cent. Indian capital the Swedish Company would have some Indians who could represent them on the directorate. As a businessman, I say, in all such cases we will be open to discussion, but until a concrete proposal is made.....

President.—Government is not going to make any proposal.

Mr. Walchand.—If they turn down ours and if they turn down yours.....

President.—I think you have misunderstood this part of our letter. The proposal was not that the Government was going to form the syndicate. We asked your opinion as to whether a syndicate would come forward. The

syndicate will come forward with their proposals and then Government will examine those proposals and if the proposals are found to be feasible Government may accept them. The proposal must emanate from the sales syndicate formed by the Indian community who must say "this is our proposal". What we want to know is, could such a company be formed?

Mr. Walchand.—To that we say, yes.

President.—Then that syndicate has to satisfy the Government that all interests would be impartially looked after, that is to say, if the Swedish Match Company remained or if any foreign capital came in they would have a fair hearing.

Mr. Mathias.—The selling agency would have to command the confidence of practically all the manufacturers.

Mr. Walchand.—Yes. My committee as such have not considered this eventuality but as a businessman I may assure the Board that we will consider the details of the sales organization when they are put forward on their own merits. If it is insisted that the Swedish combine should exist, I am sure the Indian commercial community as businessmen would consider how to deal with them. But at this stage I don't think I have got sufficient data nor have I discussed this question with my committee.

Dr. Matthai.—Does the committee identify itself with the other suggestions that you have put forward? I am asking you about this question of fixing the price. Does the committee adhere to the view that the price that is fixed would have to be fixed for each manufacturer separately?

Mr. Walchand.—Not necessarily. There I think some amplification is necessary. We might put them into two or three categories, say, A, B and C. If the Swedish Match combine are to exist and their cost production is the lowest, we would put them in, say, class A and other semi-mechanized Indian manufacturers in class B and the last would be C. The C class would be for only a period of two or three years; at the end of three or four years they would have to come up to B. If they did not they would automatically be wiped out. Similarly the B class at the end of three years or whatever the period might be, would have to come up to the standard of class A.

Dr. Matthai.—Your point is that the price is not fixed for each manufacturer but for each class of manufacturer?

Mr. Walchand.—Yes.

Dr. Matthai.—As I understand it, your classification is rather based on the degree of efficiency, equipment, etc.

Mr. Walchand.—The C class is the cottage industry. We do understand that possibly ultimately it will go out, but it would take its own course.

Dr. Matthai.—Supposing you fixed prices for the 3rd quality which is considered high enough for it, what is the inducement for it to come up to the quality of the second class?

Mr. Walchand.—Supposing the cost of the C class is roughly 20 annas and we say we will allow them 10 or 12 per cent. or whatever it is and thus allow them 22 annas. If they reduced their cost during the period to 18 annas from 20 annas they are welcome but they would be given to understand that at the end of three years they have got to come up to the B class whose cost will be 18 annas. If they don't do that they won't be licensed and they won't have any quota. We are not going to put any premium on inefficiency.

President.—Will you be prepared to deal with the cottage industry as it is called in Calcutta?

Mr. Walchand.—The idea is to give them an opportunity for a period of three years to come up to B class, and at the end of six years, to come up to A. The B class in their own interest will then have to come up to the A class.

Mr. Mathias.—Do you propose to give quotas to all the cottage factories?

Mr. Walchand.—I don't say all. By cottage I don't mean entirely hand manufactured.

President.—What would you do with them?

Mr. Walchand.—I won't take them into consideration. They may take advantage of the Rs. 1-8-0 duty and of the peculiar local circumstances and needs and make a market for them. But I am afraid they would have to go out altogether ultimately, and that cannot be helped.

Dr. Matthai.—I see an inherent difficulty in your scheme and that is this. You say that the B class man must in the course of five years be in a position to reach Class A and you are suggesting a scheme of quotas. A very essential factor in the improvement of costs is increase in output. But if outputs are allocated on a fixed basis, an increase in output would be impossible to achieve.

Mr. Walchand.—I am told that we are manufacturing 65 per cent. or it might be 70 per cent. and about 30 per cent. is still imported. Of this 30 per cent, say, about 5 per cent will always remain for luxury-wallas. So, there is scope for development to the extent of about 25 per cent.

Mr. Mathias.—You have already a capacity of production exceeding the demand.

Mr. Walchand.—The figures vary. The figures given to me are 23 million gross for consumption and 17 million gross for production. If your information is correct that we have a capacity to manufacture more than we can consume, the country is absolutely safe.

President.—That includes their 6 million gross.

Mr. Walchand.—It does not matter. With that 6 million gross we will gradually be able to build up. It is not only increased production that will reduce their overhead charges but the introduction of machinery for operations which are now done by hand. The cost of these factories as compared with that of the Swedish is more now because they are not doing as many of the operations mechanically as the Swedish people are doing. The introduction of more machines is a great factor in the reduction of costs. Their only difficulty has been uncertainty of protection. Every year in the month of February, every one has been thinking "will the duty be there or will there be a sudden change"? This is because the present duty is a revenue duty. It must be made a protective duty as in the case of the Steel industry so that there would be an inducement to manufacturers to invest money on machinery and reduce their cost and if necessary increase their production and look out for export to other countries, if possible.

President.—I should like to tell you one thing. Supposing the Board comes to the view that some sort of a sales organisation should be formed, it would not be ordinarily the Board's duty to find out how the sales organisation ought to be formed. That is a thing which is entirely for the industry to consider.

Mr. Walchand.—No. If it is treated as a public utility company, it will have to be considered in the same way as the East India Cotton Association or the Stock Exchange. It will have to get a charter.

President.—First of all you must prepare your draft charter.

Mr. Walchand.—Yes.

President.—You must say that this is your draft charter and then go to the Government and say "give us this". It is for you to do that. I am just trying to point out that it is for the businessman to evolve their scheme.

Mr. Walchand.—The minute we know that the Tariff Board are inclined more favourably.....

President.—How? There is no complete scheme before us. This is not a complete scheme. We are only discussing it just now. When it comes to doing business, you will find thousand and one other difficulties.

Mr. Walchand.—As regards the first representation, we have gone much further than the report.

President.—What we are concerned with is this. First of all we must be satisfied that there is a need for such a sales organisation; that point we will

consider; secondly, that a sales organisation can be formed—on that, of course, we may be informed by the business community that there is a possibility. Then, of course, the question would arise—what form the sales organisation will take? It is for the sales organization to come forward with a scheme and submit it to Government saying that the scheme may be explored.

Mr. Walchand.—Might I suggest that in the case of the Stock Exchange it was the Atlay Committee who drafted the rules and sent them to Government who in turn forwarded them to the Stock Exchange.

President.—That Committee was appointed for a different purpose.

Mr. Walchand.—As regards the East India Cotton Association, if my information is correct, the Government said: "The Committee have recommended those rules. What have you to say to them"?

President.—The East India Cotton Association is not carrying on any business, and the Stock Exchange also is a body which is not as such carrying on any business. Here we are concerned with an actually trading concern. There is a distinction between the proposed sales organization and the other bodies you have cited. It is for you to say "This is what we have agreed to and on these lines we can float a company, or have floated a company. What has the Government to say? Will the Government give us a monopoly on those conditions"?

Mr. Walchand.—In view of what you have said, I shall put it before my Committee. I think we will be able to give you some further details about the proposed sales organization.

President.—It requires to be considered from more points of view.

Mr. Walchand.—We have, as you can see, considered it from various points of view.

Mr. Anandji.—Unless we know what the intentions of the Tariff Board are with regard to foreign competition, we cannot form any organization. First of all, your report has to come out.

President.—I can tell you this much that the Board would not ordinarily go into a scheme like that. That would be a matter for subsequent consideration by Government. We simply wanted to ascertain from you two facts, viz., whether you think that a sales organization, if formed, would meet the situation and whether a sales organization could be formed. As to the lines it should take in detail, we are not prepared to express any opinion.

Mr. Walchand.—We say that it could be formed and that it should be formed. Further details we will send you later.

President.—Take the case of Germany, where the same state of affairs arose. It is for you to put forward such a scheme. All the manufacturers should arrange between themselves and say "this is our scheme".

Mr. Walchand.—We appreciate the difficulty.

Dr. Matthai.—Government would just confer the necessary legal status.

President.—But all the earlier steps had to be taken by the industry itself. You will realise that is what is required. It is no use discussing with us on those lines because we are not the authority on that point.

Mr. Walchand.—We will try to meet that requirement.

President.—You say that the President of the Tariff Board appears to lay stress upon the revenue consideration. There again you have entirely misunderstood the position.

Dr. Matthai.—The President of the Tariff Board did it only illustratively.

President.—The President of the Tariff Board is not concerned with Government revenue except that Government may require it. They may say "we want this revenue and we must have it". If you refer to our terms of reference you will find that they say this. "If the duty is declared to be protective and if Government still want this revenue, what form of taxation do you suggest"? We are not concerned with the question whether Government want that revenue or not. Government may not want the

revenue or Government may look for it somewhere else. If Government wanted revenue, we should have to consider the form in which they could take it from the Match industry and whether it was a good form of revenue.

Mr. Walchand.—To that we have replied. We say "the loss to the Government revenue will be made up in more ways than one. Thus the Government can get super-tax, income-tax and the like taxes from a prosperous industry which will also contribute largely to the increase in railway freight, etc." There we have followed the lines adopted by the Fiscal Commission.

President.—You have not appreciated the Government revenue point of view. Government say "we are going to get all the income-tax and so on. Still, we find a deficit of Rs. 5 crores in our revenue which has to be made up. There is the match industry; there is salt; there is income-tax and so on and we want to take something from the Match industry". Then only the question arises. Having taken into account every source of income, Government find that they want Rs. 5 crores—this amount is only for the purpose of illustration—and then they look round for the source from which they could get this amount. Then they say "could we get anything from the Match industry as we do from the textile or steel industry". Then the question would arise how should the amount be raised and on that point you have not advised us at all.

Mr. Walchand.—We have read that in this sense. The question is how could the loss in the import duty be replaced by the local Match industry itself? To that our reply is that the local industry will yield more revenue in the shape of income-tax, super-tax, and so on.

President.—Could Government get income-tax equal to Rs. 1-8-0 per gross which is the present duty?

Mr. Anandji.—My Chamber has recommended that Government may charge an excise duty provided that the existing import duty on matches should be increased at least to the extent of the excise duty thus levied.

President.—I am glad that you suggest that. Supposing Government wanted any revenue from the Match industry—we will put it that way—the protective duty must not be disturbed that is to say if an excise was levied, the protective duty must go up by the same amount.

Mr. Anandji.—Yes.

Dr. Matthai.—Mr. Walchand, would your Committee accept that suggestion?

Mr. Walchand.—I will put the Calcutta suggestion to my Committee.

President.—You must explain to your Committee the meaning of this. It does not necessarily follow that Government want the loss in the import duty to be made up. Mr. Anandji, your suggestion in such a case is that the import duty should go up by the amount of the excise duty.

Mr. Anandji.—What we want to say is that the protective effect must be there.

Dr. Matthai.—You mean that the difference must be maintained.

Mr. Anandji.—Yes.

Cottage factories.

Dr. Matthai.—What exactly is your position with regard to cottage industries? You ascribe to the Tariff Board the opinion that on economic grounds the cottage industries will disappear. We have formed no opinion yet. Suppose the Board suggested that there ought to be some kind of special assistance given to cottage factories, what would be your position?

Mr. Walchand.—I will jump at it. My committee has been under the impression that the cottage factories cannot, in view of mass production and its consequential effects, compete with big factories using machinery. The figures running in their heads have been 13 to 14 annas for big factories and 22 to 23 annas for cottage matches.

Dr. Matthai.—You don't express any opinion on the general point whether there is or there is not a future for them.

Mr. Walchand.—No. If they are to go, we sympathise with them and say we are sorry. But if any means could be devised for keeping them on, we would welcome them.

Dr. Matthai.—Where there is a local supply of wood, they may have freight advantage.

Mr. Walchand.—Yes.

Mr. Mathias.—Taking a long view, on economic grounds, would you support any discrimination between the cottage industry and the larger industry which would make it probable that the cottage industry would take the place of the larger factory?

Mr. Walchand.—It is a bit abstract for me.

Mr. Mathias.—What I want to know is the extent of the consideration you would be prepared to show. Would you be prepared to show any discrimination between the two kinds of factories in the matter of excise which would give cottage manufacturers such an advantage that they would multiply and take the place of the larger manufacturers? Would you support any suggestion of that kind?

Mr. Walchand.—No. I thought that the case put to me by Dr. Matthai was that there might be some special circumstances where with some slight concession they might exist.

Mr. Mathias.—Your reply to that is limited to the cottage factories in up-country villages where there may be local supply of wood.

Mr. Walchand.—I would not restrict it to such narrow limits. If by some slight concession they could be kept up, they should be kept up. The opinion expressed in our letter was based on the impression that there was no chance for the cottage industries.

President.—We have never been able to understand what is meant by a cottage industry. We know what are called home industries rather than cottage industries. What we have seen of cottage industries is simply this that a man has a splint cutting machine and a veneer cutting machine in one place and he has got in another place a number of people dipping the splints by hand and completing the boxes.

Mr. Walchand.—A full time occupation for the man?

President.—What we have seen only comes to that. Instead of manufacturing these three different things under one roof there are three roofs. That does not make it a cottage factory. Mr. H. Lalji, you know very well the conditions of the industry on the Bombay side anyhow. Could you tell us whether there is any instance in which a family buys splints, say, for 50 gross of matches or 20 gross of matches and also veneers for the same amount of matches and takes these home and converts them into finished matches and sells to the consumer.

Mr. Lalji.—None.

President.—In every case these people simply take the half manufactured stuff home and work it and bring it back to the factory in which splints and veneers are made.

Mr. Lalji.—Yes.

President.—That is hardly a cottage factory. It simply means that instead of using power they do the work by manual labour.

Mr. Lalji.—With regard to this question, after the Tariff Board visited Bombay, there was an enquiry by the Government of Bombay. The Chief Inspector of Factories came to our factory and asked us about the number of people engaged in this kind of work and we said about 500 or 600. When he went round the villages he actually saw about 1,100 people engaged in this work. We do not know all those people. We only know those who take the veneers from us.

President.—The factories are not properly equipped and they have to use manual labour.

Mr. Lalji.—They think that this work may be saved to those persons who are in villages—the work of pasting the veneers, etc.

President.—But time must come when they will cease to compete.

Mr. Lalii.—Yes.

President.—It is not like the case of a handloom industry where a family may manufacture and use it for itself and it may also sell some of its production to other people.

Mr. Walchand.—There might be cases, as Dr. Matthai said, where there might be a local supply of wood.

President.—At some stage or other, you must use machinery. You cannot make splints by hand.

Mr. Mathias.—The real home industry is in the making of boxes. That sort of occupation is afforded by large factories like Esavi's.

Dr. Matthai.—You don't go so far as to suggest that the employment of power necessary deprives an industry of the character of cottage industry. If I can get electric power in my own home and use it for a domestic industry my business does not cease to be a cottage industry necessarily.

Mr. Gandhi.—No.



Southern India Chamber of Commerce, Madras.

Letter dated 3rd May 1927.

With reference to your letter No. 257, dated the 29th March 1927, forwarding the questionnaire on the match industry, I am directed to communicate to your Board the following views of my Committee on the subject.

There is no doubt that India possesses, even with any other match producing country like Japan or Sweden or Czechoslovakia, immense natural advantages for the match industry. Timber of the right sort is reported to be abundant all over India and if only the factories are located close to those areas there is no need to depend upon imported splints and logs. Although Indian manufacturers at first showed a predilection for foreign wood they have begun to appreciate, thanks to the heavy duty on splints, the qualities of indigenous wood. Cheap power is available in many places and there is no doubt that in the years to come there is going to be a rapid improvement in other place also. Though South India is at present deficient in the supply of cheap industrial power, owing to the distance from the coal fields and the absence of electric power cheap enough for industrial purposes there are gigantic schemes like the Mettur and Pykara Schemes that are being worked out. South India abounds in cheap labour which is evident from the large emigration figures, but skilled and technical labour will have to be imported for some years for running big factories. The home market is ever enlarging and is sure to absorb an increasing supply year after year.

Without the help of protection it is not expected that the industry can withstand foreign competition. It is a trade so liable to price agreement and price cutting by foreign vested interests, that till the native made matches improve in quality, protection is necessary. The strength of foreign vested interests can be seen in that prices have declined recently in spite of the imposition of over 100 per cent. duty. It is the opinion of the Chamber that the industry will eventually be able to face world competition without protection as the industry is already competing in respect of price and has only to extend production and improve quality and finish. It is an industry in which the advantages of large scale production can be achieved and increasing output would mean increasing economy of production; it can also be legitimately expected that in course of time the whole needs of the country could be supplied by the home production. Further, in view of Indian economic conditions this industry can as in Japan give a subsidiary occupation to the rural population.

In the opinion of this Chamber, considering the progress the Indian industry is making, though it may be necessary to retain the present rates of duty for a year or two it will be possible to reduce them considerably afterwards. It is however urged that the Indian industry stands in great need of protection against another competitor, viz: the foreign syndicates setting up match factories in India. With their technical knowledge and past experience and access to industrial finance they are sure to put their foot on this infant industry and it is therefore suggested that in their case a discriminating excise duty equal to the import duty should be imposed or a reasonable rate of bounty should be given to the Indian-owned factories on the basis of production.

Karachi Chamber of Commerce.

Letter dated 4th May 1927.

With reference to the Press Communiqué forwarded with your letter No. 897 of the 30th November last and to the questionnaire received with your letter No. 257 of the 29th March 1927, both on the subject of protection

to the above industry, my Chamber wishes to express the following views on the general question of such protection.

On principle, the Chamber is opposed to legislation preventing the free exchange of commodities, especially the free import of such a universal necessity as matches. The Chamber recognizes however that India must maintain Customs duties for revenue purposes and considers that matches are one of the best articles for inclusion in the Schedule as the burden of the tax is very widely distributed. The existing tax, however, in the Chamber's opinion, far too high and should be reduced at the earliest possible moment. It considers that the exorbitant duty at present existing has resulted in the growth of an inefficient and mushroom industry, speaking generally, as is evident from the number of factories which have closed down or carry on a precarious existence, largely owing to the difficulty of obtaining suitable wood: much instability of prices has also resulted.

There is little doubt that a definite announcement by Government that the existing duty would be continued would cause a large increase in this industry and that eventually matches would cease to be imported from abroad. The Chamber feels that this would not be in the best interests of the consumer in this country as, owing to the lack of suitable raw material, India is never likely to produce such good quality matches as are made in countries which have far better natural facilities for the manufacture of this article. Moreover, the shutting out of foreign competition would almost certainly result in an increase in price to the consumer. It would also result in Government losing the whole of the import duty on matches and necessitate either the imposition of taxes on some other articles, the increase of some existing tax, or the imposition of an excise duty on Indian made matches. The latter would assist in still further raising the price against the consumer.

In conclusion the Chamber would point out that the Indian Taxation Enquiry Committee instances (in paragraph 143 of their report) the heavy duty on matches as one case where a duty, if not accompanied by an excise, results in losing Customs revenue, while fostering an unstable industry.

Indian Chamber of Commerce, Calcutta.

Letter, dated the 17th May 1927.

I am directed to send to you hereby the views of my Committee in regard to the various queries referred to in the questionnaire forwarded to me under cover of your letter dated Rangoon, the 29th March, 1927.

2. There are several questions in the questionnaire which are of a technical character of which my Committee have no direct knowledge. They, therefore, do not propose to reply to the questions *ad seriatim* but would like to deal with only such broad points therein as are of general importance.

3. *Introductory.*—My Committee are not in agreement with the belief generally prevalent that the Indian manufactured matches are inferior to the imported ones. That impression which had some foundation in fact a couple of years ago when the Indian match manufacturing industry was in its infancy is, in their opinion, now becoming groundless as a result of the subsequent improvement in the quality of matches under modern methods of manufacture and expert supervision and such a view is also getting slowly out of date.

4. *Raw materials.*—My Committee are of the opinion that there are extensive tracts of unexplored forests which can supply the essential raw material for this industry, *viz.*, soft wood suitable for manufacture of splints and veneers, to the full extent of our requirements. What is now needed is only a definite forest policy on the part of the Government which would overcome the difficulties in the way of obtaining a sustained supply of suitable match wood in requisite quantity. My Committee are gratified to learn that the Forest Research Institute of Dehra Dun are carrying on research into the

availability of soft wood for the manufacture of matches and they only hope their efforts in that direction will bear fruit as the existence, sustenance and growth of this industry will depend a great deal on the success their experiments meet with. My Committee are informed that plantations of particular species of wood will be necessary and will be of great advantage. They would, therefore, suggest to the Forest Department the plantation of quick growing and soft species of wood such as *Bombax Malabaricum*, *Anthocephalus Cada-damba*, *Trema* sp., etc., which would reach exploitable sizes within periods varying from 10 to 25 years. There is another very serious handicap to which the match industry is at present subject. It is in respect of the freight charges for the transport of these logs of wood carried by Rail and Sea. Indian logwood is cheap in price, and almost all the factories could use Indian wood. But the cost of freight in the transport of the wood to the factory is so heavy that it becomes almost prohibitive to use this wood. The truth of this remark will be borne out by only one instance. At present, logs of wood can be brought to port—towns, *e.g.*, Calcutta from Siberia at less cost than from Assam. My Committee are of considered opinion that if cheap transport facilities by rail and sea are provided, most of the manufacturers of matches will use Indian wood to a considerable extent.

5. *Other raw materials.*—As regards chemicals with the exception of two or three items like Amorphous Phosphorus, Chlorate of Potash everything is manufactured in India and in the event of the match industry being firmly established in India, there is a great probability of other raw materials also being manufactured in India. Thus, with the establishment of the match industry on a sound footing other subsidiary industries will also come into existence and in the present depressed condition of India, this will be no small boon.

6. *Labour.*—It is all too well known that India has no scarcity of labour, and we need not, therefore, have any apprehension on this score. There is a vast potential supply of labour, both skilled and unskilled. While the industry is in its infancy, foreign skilled labour will have to be imported, but ultimately it will be replaced by Indian labour. The match industry will create a new avenue of employment for both skilled and unskilled labour and will thus help to relieve to some extent the scourge of unemployment which is getting very acute every day and by directing labour to this new industry will also relieve incidentally to some extent the pressure of the population on agriculture as a source of livelihood.

7. *Market.*—India's annual consumption of matches may be roughly estimated at 20 million gross boxes (Bengal alone consumes 6 million gross boxes annually), and a considerable increase is likely to be witnessed in the consumption of matches as a result of improvement in the standard of living of the masses and the abandonment of primitive methods of ignition of fire by steel and granite now in existence in several small villages. At the present time, hardly one-third of our total consumption of matches is manufactured here, while all the rest is being imported. There is thus a vast home market to be catered for by the Indian match manufacturing industry.

8. India's competition to-day is keenest from Sweden from where we now import the largest quantity of matches. Japanese competition has been eliminated from India, thanks to the Swedish Trusts' policy of capturing the Indian market from the Japanese by dumping matches in India at cheap and also perhaps unremunerative prices.

9. *Claim for protection.*—The Match industry, in the opinion of my Committee, fulfils all the conditions laid down by the Indian Fiscal Commission in paragraph 97 of their Report. In India, there is an abundance of wood which is the chief raw material for the manufacture of matches. My Committee are aware that some factories have to import wood from abroad, but it is due not to absence of suitable wood in sufficient quantities in India but to lack of forest development. If the Government seriously undertake to carry on research to find out soft wood, there is no doubt that a sufficient and sustained supply of soft and suitable wood will be guaranteed to the industry. The industry has experienced no difficulties with regard to cheap power which has been available. As regards labour, India has no dearth of

it and no anxiety need be entertained regarding the sufficient supply of labour, skilled and unskilled. Besides, India has a natural advantage of a vast home market for this article of daily use and universal consumption.

10. It is now a matter of common knowledge that several experiments of starting Match factories in India came to grief before 1922. It was in 1922 that a duty of Re. 1-8 per gross was imposed by the Government on the import of matches for revenue purposes. This high duty served as a protective measure to the indigenous Match Industry and under the expectation of the continuance of these high revenue duties which exerted a virtually protective effect, many factories were established in India, and they have since been working with a fair amount of success. The fact that efforts for establishing the Match industry in India failed before 1922 and that they met with a considerable amount of success after 1922 when the present high duties were imposed points to the conclusion that protection was necessary to the progress and growth of this industry. My Committee are convinced that the Match industry is not likely to develop in India unless sufficient protection is accorded to it for some time to come. Developed under the fostering care of the Government for some time, my Committee have reasons to believe this industry will be able to face world competition without protection. This belief of theirs is supported by the fact that the industry has shown steady progress during even the first few years of its existence, as can be seen from a steady decrease in the imports of matches from foreign countries and a corresponding increase of indigenous production during the last five years. The imports in the year 1925-26 were only about 50 per cent. of those in the year 1921-22. My Committee would also like to observe here that, had it not been for the Match factories in India, in the prices of matches would have been much higher than they are to-day and the effect on the consumer of such a state of things in respect of an article of every day use and universal consumption should also be carefully appraised. This is, therefore, an additional reason why India should be made self sufficient in respect of this commodity. There is another serious matter in regard to foreign competition which merits a very close and careful consideration of the Tariff Board, as it threatens out of existence the indigenous match industry. My Committee are referring to the formation of a huge Syndicate known as the Svenska Trust, controlled mainly by the Swedish and American people, with the avowed object of controlling the production of the Match manufacturing industry. This Trust which has an enormous capital of about Rs. 16 crores of rupees behind it has started purchasing over Match factories in Japan and Europe, our chief sources of supply of matches abroad. It has started purchasing factories in India also. In order to capture factories, this Trust employs a method common to the mentality of all Syndicates, viz., cutting down the prices of matches manufactured by it to an extent that makes it unprofitable for other individual factories to keep on working. When this happens, these factories have to be closed down or sold to the Trust, which is a ready buyer thereof, as it is a part of its general scheme of buying over as many factories as possible. My Committee view with grave apprehensions the effect on the Indian Match manufacturing concerns of the policy adopted by the rich alien Syndicate of undercutting the indigenous matches in prices even at a loss to itself at present, and dumping its goods on the Indian market, with the ultimate object of undermining our industry and enhancing the prices of matches to an unlimited extent when it succeeds in acquiring the monopoly of production. My Committee feel that it is time the Government came to the rescue of the industry which is in danger of being stifled, if left to itself, and if this is suffered to happen, the industry will find it extremely difficult to make headway again.

11. My Committee, therefore, propose that the present import duty on matches, veneers and splints should be declared as a protective duty and the existing rates of duty on these articles should be continued for a period of—say—10 years in the first instance, when a fresh enquiry may be undertaken to investigate into the position of the industry and to advise regarding the continuance, increase or decrease of the protective duty. Any reduction in the present duty will, in the opinion of my Committee, seriously jeopardise the prospects of this promising industry. My Committee would also point

out here that, even in respect of raw materials imported from abroad the Indian Match industry to-day is being handicapped owing to the very high prices charged in respect of these materials by this very Syndicate which has acquired control over these industries also.

12. My Committee are also alive to the fact that, as at present, behind the wall of protection, many more factories will be established by this foreign Syndicate and it will be difficult for indigenous manufacturers to compete with this Syndicate backed by vast resources. In the event of this happening, the object of protecting and developing this indigenous industry which is in danger of being crushed by the unfair methods adopted by the alien Syndicate will be frustrated and the consumers will be unnecessarily penalised by having to pay higher prices now without expectation of any return in the form of cheaper prices in future. My Committee would, therefore, suggest that a special protection should be granted to the indigenous Match industry by a discriminating excise duty to be levied on the products of the factories financed and controlled wholly or mainly by foreign concerns at the rate of Re. 1 per gross of their output. A large revenue will accrue to the Government from the levy of this duty and this will allay to a considerable extent the anxiety of the Government on the score of decline in Customs revenue. Besides this source of revenue, there are two other sources from which a higher yield of revenue may legitimately be expected, viz., the Incometax and the import duty on raw materials. My Committee would also emphasise here that revenue considerations should not deter the Government from extending protection to this deserving industry which has already given promise of success.

13. My Committee would like to suggest another form of indirect aid to this industry which is yet in a state of infancy, viz., provision of cheap transport facilities by rail and steam for the carriage of logs of wood to and finished matches from the match factories.

Mysore Chamber of Commerce.

Letter, dated 11th July 1927.

With reference to your letter No. 287, dated 29th March 1927, enclosing a printed copy of the questionnaire issued to all the Match manufacturers in India, I beg to inform you that at present this Chamber has nothing to offer on the subject.

Letter from the Tariff Board, to all Chambers of Commerce and Associations of Indian Match Manufacturers and Traders, No. 946-A, dated the 31st December 1927.

I am directed to forward for the information of your ^{Chamber}_{Association} a copy of the remarks made by Sir Padamji P. Ginwala, President of the Indian Tariff Board, in resuming the enquiry into the Match Manufacturing Industry in India.

2. The Board is anxious to obtain as full and complete an expression of commercial opinion as is possible, on the problems which are now engaging its attention. From the President's remarks it will be observed that there are certain aspects of the enquiry which have not yet been brought specifically to the notice of your ^{Chamber}_{Association}. Further, certain of the proposals which have been received involve considerations of general policy on which it is desirable that your ^{Chamber}_{Association} should have an opportunity of expressing an opinion, while the future organization of an industry engaged in the manufacture of a commodity in such common use as matches is a matter of considerable general interest.

3. An important aspect of the case which has been pressed on the notice of the Board concerns the activities of the Swedish Trust. As your

Chamber Association is aware, this Trust has in recent years obtained a dominating interest in the match trade of almost every country and its policy is avowedly aimed at securing a controlling interest in the match trade of the world. In pursuance of this policy, it is alleged, the Trust aims at securing a dominating position in India, partly by eliminating the smaller Indian concerns by means of unfair competition, partly by working arrangements with the larger Indian factories should this appear to be the most feasible course. Having acquired that control it is alleged that the Trust will raise prices in India, thereby exploiting the country for the benefit of foreigners. The remedy which has been most commonly proposed is the imposition of a special excise duty on matches manufactured by firms or companies financed by foreign capital.

4. The case as it has been presented to the Board combines two points of view. First, objection is taken to the employment of foreign capital in Indian industries and the demand is advanced that such enterprises should be specially taxed. The question has already been considered by the External Capital Committee appointed by the Government of India in 1925 and it is unnecessary to deal at length with the matter here. It is sufficient to point out that considerable difficulty must be anticipated in determining whether a firm is or is not financed by foreign capital and that the possibility of evasion of any such form of taxation is a serious consideration which must not be overlooked. The other aspect of the case concerns the possibility of the establishment of a monopoly. It is urged that it is undesirable in the interests of the country to allow the smaller industrialists to be crushed, thereby enabling a single firm or group of firms to fix prices considerably in excess of the cost of production. The objection applies equally to a monopoly whether engineered by an Indian or foreign firm but an excise duty on foreign capital is proposed as an *ad hoc* measure, since the danger of monopoly at present threatens from a foreign firm. It is, however, by no means clear that this proposal would be effective. Apart from the fact that no data have been put forward on which it would be possible to estimate the amount of excise duty sufficient to prevent unfair competition, it appears not impossible that the measure may precipitate the crisis which it is designed to prevent. The Swedish Trust has at its command exceedingly large capital resources and faced with the prospect of closing its factories in India as a result of the excise duty, it may resolve on the one hand to initiate a price war regardless of cost or, on the other hand, to buy out the larger factories in this country. In either event, it might be argued that a corporation of this size would have no great difficulty in effecting a practical monopoly, when the special excise could be passed on to the consumer. Another possibility which must not be overlooked is that the Swedish Trust would comply with all the requirements of the law regarding Indian capital and would thus not be liable to the special excise duty. Practical control of the policy might still remain in Swedish hands and the danger of monopoly would remain.

5. The risk of the country being exploited by a single firm or combination of firms of match manufacturers could however be met by the establishment of a regulated monopoly. It is in this direction that European countries have generally sought for a solution of the problem created by the Swedish Match Trust. There are several methods by which in existing circumstances this effect could be attained. The first and perhaps the most obvious method is by establishing a monopoly both in manufacture and sale. The Swedish Trust controls the largest and best equipped group of factories in the country and with its long experience of manufacture, it is indisputable that it could produce a standard article of good quality at a low price. From a purely financial point of view it might be considered a good proposition to hand over the monopoly both of manufacture and of sale of matches in India to this Trust on payment of an annual sum to Government. Conditions might be made regarding the employment of Indians, the issue of Rupee capital, the quality of the goods and the price at which they were to be sold. A system of this kind is in force in Greece and Poland, where the Swedish

Trust holds a monopoly. This, however, would mean that match manufacture would cease to be a national industry and on grounds of sentiment alone such a proposal affords no practical solution of the problem. A second method of securing control is by the establishment of a Government monopoly both of manufacture and of sale. This is essentially the system which is at present in force in France. There are, however, well-known objections to State manufacture and it is generally accepted that Government is normally not in a position to manufacture either so well or so cheaply as a private firm or a company.

6. Another means of preventing exploitation is by establishing a monopoly in sale, manufacture being carried on by private agency but the production regulated by requiring that the manufacture of matches should be under license. The establishment of new factories or extension of existing factories would then be controlled. Sale could be entrusted either to a separate organization or retained in the hands of Government itself. In the former case it would be necessary to form a separate sales syndicate, to which the monopoly would be entrusted. A system of this nature is in force in Germany, where a sales organization has been formed, the capital being contributed by the match manufacturers who also form the directorate of the corporation. Definite quotas of production are fixed for each manufacturer and all sales are effected by the sales organization. Government, however, retains the right of controlling the price at which the sales syndicate sells, should this appear excessive. Factories are licensed by Government and an increase in the production of matches either by the construction of new factories or extension of existing ones can thereby be prevented. At the present time the number of match factories in India is large and their size varies from the large up to date factory employing the latest machinery to the small factory where all processes are carried out by hand. There is, therefore, great difficulty in securing any effective organization of manufacturers and the introduction of the German system in its entirety would be by no means easy. At the same time some development of this method of control may appear feasible. It might be possible to organize a sales corporation comprising interests independent of match manufacturers. In that event it would be necessary to fix the price at which such a corporation purchased its supplies, the price at which it disposed of them, and the proportion in which purchase was to be effected from each factory. The opinion of your ^{Chamber} _{Association} is requested as to whether any such corporation could be formed and, if so, whether an arrangement on these lines would prove satisfactory.

7. There remains the system of Government monopoly of sales. Restriction of manufacture by means of licensing will still be necessary since Government could not undertake to purchase matches to an unlimited extent. It would also be necessary to fix the price at which Government would purchase from manufacturers. As regards selling arrangements, various methods are possible. Government wholesale depôts might be established in the larger centres. But this would involve the organization of a new department on a somewhat extensive scale and might well be objected to on the ground of expense. Financial control, however, might be secured on much the same lines as obtains in the excise department for the sale of country liquor in some provinces. Dealers might be required to pay into the Treasury both the cost price and the excise duty on matches. On production of the Treasury voucher by the purchaser the manufacturer would then supply the required quantity of matches and would obtain payment from the Treasury on presentation of the voucher. This method, however, might be considered cumbrous and unsuited to the requirements of the trade.

8. If a monopoly in sales is considered desirable, the most satisfactory arrangement would appear to be to entrust it to an independent sales corporation. Till, however, the organization of such a corporation becomes feasible or if it is found impossible, Government may administer the mono-

poly through its own agency with the assistance of a committee representing manufacturers, traders and general commercial interests. The function of such a committee *inter alia* might be to advise from time to time as to the price, quality, amount and distribution of output among the various factories. The import of matches might be undertaken by the Government acting with the advice of the Committee referred to above or might be controlled by a system of licence.

9. Any such system of monopoly presupposes that the factories undertaking manufacture are well equipped and of reasonable size and it would follow, therefore, that the smaller factories would disappear. The opinion of your ^{Chamber}_{Association} is requested as to how far such a result is desirable. I am to point out that the concentration of match manufacture in a few factories organized on a large scale would probably result in a substantial reduction in the cost of production. Further, a sales organization acting through a single agency would reduce the cost of distribution and the absence of competition would render unnecessary the very large number of different labels at present in use. With the kinds of labels reduced to a minimum, a still further reduction in costs could be effected while the elimination of competition would also result in the reduction of the profits of the middleman, which the Board has been informed are excessive. Further, mass production in well equipped factories may reasonably be expected to raise the quality of Indian matches while with a standardised product the prejudice against Indian matches, based mainly on the output of the smallest factories established in unsuitable localities, is likely to disappear rapidly. I am also to point out that at present there exists a very real danger of over-production, specially in particular localities. The growth of the Match industry around Bombay renders it increasingly difficult to secure a market for the goods produced. Competition is therefore intense and there has been a very rapid fall in price. A system of control on these lines will tend to prevent over-production and wasteful competition and to ensure a reasonable standard of quality. It will also secure a fair profit to the manufacturer and generally help to stabilise prices and at the same time safeguard the Government revenues. It will further have the advantage of maintaining a substantial share of the production in the hands of Indian manufacturers. I am now to request that your ^{Chamber}_{Association} will favour the Board with its views on the various matters dealt with in the enclosure and in particular as to how far it considers a system of Government monopoly in matches is desirable both in the interests of the industry and of the country in general. If it considers such a system desirable, I am to enquire which of the methods outlined in this letter it would consider would secure the best results. The Board would esteem it a favour if your reply could be submitted at a very early date. I am to express regret that it has not been possible to consult the ^{Chamber}_{Association} on these points before, but many of the considerations and suggestions which form the subject of this letter, could not be stated as definite issues until the examination of witnesses had reached an advanced stage.

10. In conclusion, I am to explain that the Board has arrived at no conclusion as regards the various matters which form the subject of this letter and that any views which have been expressed must be regarded as illustrative only.

Burma Chamber of Commerce Rangoon.

Letter, dated 28th December 1927.

In reply to your letter No. 946-A., dated 5th December 1927, I am directed to say that this Chamber is strongly against Government interference in any shape or form until it can be proved that the so-called Swedish monopoly charges extortionate prices for matches to the public.

The Bombay Presidency Trades Association Ltd., Bombay.

Letter, dated the 29th December 1927.

I am directed to acknowledge receipt of your letter No. 946-A., dated the 5th instant, which was placed before my Committee at a Meeting held on the 20th instant and the contents together with the remarks of Sir P. P. Ginwala fully discussed.

In reply I am to state that the considered opinion of my Committee is as follows:—

That no industry, be it financed by foreign capital or otherwise should be harassed or its operations be impeded at the present time. India, to-day, as far as general manufacture is concerned is in its chrysalis stage and cannot afford to lose the smallest opportunity of increasing its knowledge of scientific production, synchronously with economic principles.

This particularly applies to the Match Industry as at present attempted in India. The local product is without doubt in urgent need of improvement, which cannot be carried out by the present doubtful method of some local manufacturers of very closely copying well known labels. This procedure is possibly legal but morally is not calculated to gain the confidence of the class of people to whom ultimately they must look to help them to establish themselves as manufacturers desiring recognition in preference to the forsigner.

With reference to paragraph 3 of your letter wherein you state that the apparent object of the Swedish Match Trust is an endeavour to obtain predominance in every country of the world. It may be mentioned that the principle manufacturing countries with export markets are England, Sweden and Germany and that is competitive in both their respective home markets and abroad and to accept the theory that in the event of the trust eventually gaining control the consumer will be compelled to pay prices that on cost production will be exorbitant, is ridiculous and impossible, in these days of patent lighters and the unlimited possibilities in this particular direction.

World trade throughout time has been built by competition and no Trust yet formed has stifled effort to produce at lower and more beneficial rates. Naturally this view resolves itself into a question of the survival of the fittest, which does not necessarily always apply to capital means. In any case without doubt the majority always reaps the benefit.

My Committee are unanimously agreed that foreign industries operating in this country should be formed with rupee capital. As regards the particular industry under discussion they are of opinion, as match making is practically in its infancy in this country, compulsory facilities should be given by the foreign firms to educate a certain percentage of Indians, under an apprenticeship system, in the present methods of scientific production.

Moreover, I am directed to inform you that my Committee suggest the alternative of a combination of the country manufacturers who are raising the plant. If the whole question is worthy of the notice of a Government enquiry and examination, which may be taken as a sufficient indication that there are real possibilities of good markets for Indian matches in the immediate future, then surely there is sufficient capital to be found internally to put the industry on a real competitive basis, which need have no apprehensions from any combine.

In conclusion I am to state that my Committee are opposed to any measure which will tend to retard the progress of industrial education, that the few might benefit financially.

Karachi Chamber of Commerce, Karachi.

Letter No. 20-C. A. 9, dated the 4th January 1928.

In reply to your letter No. 946-A. of the 5th December 1927, I am to say that on the broad question of principle this Chamber is strongly averse to

any kind of Government interference with Trade or Industry, except in so far as it necessary for the collection of the necessary revenues.

Though the above general expression of view practically shows this Chamber's attitude towards all the tentative suggestions put forward in your letter, my Committee wishes to make the following observations:—

On page 1 of your letter it is stated that "the future organisation of an industry engaged in the manufacture of a commodity in such common use as matches is a matter of considerable general interest." This is agreed, but there are many industries to which the same remark might be applied. For instance, sugar, yarn, piece-goods, tobacco, leather, paper and cement, to mention only a few, are all articles which are both the subject of industry in this country and are also imported. If the principle be accepted of Government interference in one industry engaged in a commodity of common use, it would be difficult to withstand a demand for it in all other similar industries. Such interference can but add materially to the expenses of the State, whilst it is highly detrimental to private enterprise in that no one can make plans for engaging in any particular industry owing to the uncertainty that Government may some day step in and alter the whole economic outlook on which those plans have been based.

A set has been made against the employment of Foreign Capital, but my Committee is quite unable to accept the principle that this is contrary to Indian interests. The development of Indian industries in this country is only in its infancy and needs every encouragement to enable it to expand. Every increase in it is all to the good of the country for, whether Foreign or Indian Capital be employed, industry entails the use of Indian labour, adds to the Government Revenues, tends towards the reduction of prices and encourages the use of Indian products.

As to the danger of the establishment of a monopoly by any one concern, it would not necessarily act detrimentally against the interests of the consumer. It involves a very large and highly organised system of manufacture with low overhead costs. It is a generally accepted principle that the greater the consumption the more the profits, hence it is one of the most important aims of manufacturers to stimulate a very wide demand for their products. On the other hand, to raise prices unduly above the cost of manufacture, would be merely to retard demand, hence monopolists would only be acting directly contrary to their own interests by doing so. This natural law automatically ensures a regulated monopoly—one of the suggestions of the Tariff Board—without all the cumbrous machinery entailed by State control.

Fear has been expressed that the establishment of a monopoly would cause the smaller Indian factories to disappear. Probably this would occur in any case in course of time, but it is admitted by the Tariff Board that their suggestion for a monopoly regulated by Government would have the same effect. To the extent that such factories are not able to manufacture so well or so cheaply as larger concerns it would no doubt be in the general interests that such uneconomical factories should disappear.

A point has been made of the saving that would be effected by the limitation of the number of labels under the suggested Government monopoly. This is to restrict the natural choice of the people for variety in such small matters without, in my Committee's opinion, any real consequent benefit. The difference in the cost of printing different varieties of labels is infinitesimal and the cost of attaching them to the boxes is practically the same as it is customary to use only one variety of label in any day's manufacture and not to attach a variety of labels to the product of one day's work.

Then, there is an objection to the alleged excessive profits of the "middleman". By the employment of the singular the inference seems to be that there is only one middleman, but my Committee believes that many middlemen are essential to the sale of such universally used things as matches, where every little village in the country has to be reached and where the number of sellers actually finally in touch with the millions themselves must be legion. What may, therefore, appear an excessive margin between (1)

production and transport costs, and (2) the price paid by the actual consumer, would not seem out of the way when it is remembered how many middlemen there are to be remunerated, whilst the individual profit of each owing to competition is very small.

As regards the prejudice against Indian made matches, based mainly on the output of the smallest factories established in unsuitable localities, these factories are likely to disappear whether matters be left as they are, or whether Government create a regulated monopoly. It is admitted by the Tariff Board that mass production in well-equipped factories may reasonably be expected to raise the quality and this is the tendency under the existing circumstances.

It is pointed out that there is a danger of over-production and that there has been a very rapid fall in price in consequence. Judged by the standard of "the greatest good of the greatest number", which in this case is clearly the consumer, this danger, as it is called, is actually beneficial to the latter. But, in any case, it can only exist temporarily, as the law of supply and demand must operate in the long run. In the same connection the Tariff Board seems to be concerned with maintaining the profits of manufacturers, but surely this is no part of the business of Government, especially as any increase in prices could only come out of the pockets of consumers.

For the reasons given above this Chamber is strongly against any of the methods suggested for the control of the matches industry, but there remains the question as to how the Government Revenues are to be safe-guarded as they are rapidly falling away under existing circumstances. My Committee feels that this aspect of the question has been given a subsidiary place in the deliberations of the Tariff Board and has been overshadowed by the subject of the protection of the industry and especially by the desire of some to eliminate foreign competition. My Committee feels that a close consideration of the problem of safe-guarding Government revenues would result in ways and means being found to do so, but it is essential, in my Committee's opinion, first to clear the ground by rejecting all idea of Government interference in the organisation of the industry, a matter in my Committee's view quite outside the province of the State.

The Upper India Chamber of Commerce, Cawnpore.

Letter dated Cawnpore the 16th January 1928.

I am directed to refer to your letter No. 946 A, dated the 5th December 1927 enclosing a copy of the remarks made by Sir Padamji P. Ginwala, President of the Indian Tariff Board on the subject of the Match Manufacturing industry in India.

It is noted that the Tariff Board is anxious to obtain as full and complete an expression of commercial opinion as is possible on the problems connected with this industry.

From your letter, and from the President's remarks, these problems seem to centre round the fact that the Swedish Match Manufacturing Trust has successfully established itself in India. Smaller and less successful manufacturers, or would be manufacturers desire to attack the position of the Trust and to this end they have recommended the imposition of a special excise duty on matches manufactured by firms or companies financed by foreign capital.

An apprehension, created by the successful entry into India of the Swedish Trust and the fact that this Trust has obtained a dominating interest in the Match Trade of almost every country, is that the Trust will virtually establish a monopoly in India.

Among other remedial measures suggested are :—

- (a) a monopoly of manufacture by Government; or

- (b) the establishment of a regulated monopoly of manufacture by private interests, including the Swedish Match Trust, with as a concomitant;
- (c) the regulation of sale, whether as a monopoly or otherwise by private interests or, in the alternative;
- (d) a monopoly of sale by Government itself.

The Chamber's opinion can be communicated somewhat briefly.

My Committee have entirely failed to understand why all this attention should be devoted to the Match Industry, and can only assume that the explanation lies in the fact that this industry has always had an inexplicable attraction for the small industrialists, who now wants to bolster up a thoroughly unsound economic position at the expense of the tax payer and consumer.

It is not as if the protection of the match industry was a case of developing India's material resources. My Committee understand that suitable wood for the match splints and for the box veneers is not to be found in India in concentrated areas as is the case in Sweden and America, nor, do they understand, are the principal necessary chemicals to be found in India. As a result much of the wood and most of the necessary chemicals have to be imported and will still have to be imported no matter how and in what direction match manufacture in India comes to be monopolised or controlled.

My Chamber consider that the proposals to introduce a discrimination against foreign capital involves the acceptance of a most dangerous principle and they are unhesitatingly opposed to any such discrimination.

In regard to the apprehension that the operations of the Swedish Match Trust will bring about the establishment of a virtual monopoly of manufacture, my Committee hold the view that such monopoly will not be harmful to the consumer, while on the other hand it is always open to other interests to combat this monopoly on its own ground, if this can be done economically. We have in India large factories controlled by foreign capital manufacturing cigarettes in India, and their products are sold cheaply enough. Similarly, with matches, if the Swedish Trust or any other corporation or individual can successfully manufacture good matches in India it is certain that the demand will be so great as to keep the price down to a fair level.

As for the suggestions that Government should enter as a monopolist, or otherwise, into either the manufacture or the sale of matches, by its own agency, my Committee are absolutely opposed to any such suggestion, specially remembering the quality and the price of French Matches which are a Government monopoly.

सत्यमेव जयते

The Indian Merchants' Chamber, Bombay.

Letter dated 25th January 1928.

The Committee of the Indian Merchants' Chamber have considered the note of the President of the Tariff Board. The match industry has benefitted by the revenue duty of Rs. 1-8-0 imposed since the last five years. My Committee, however, believe that a mere revenue duty would not be of any use to any particular industry. An industry if it stands in need of protection requires a protective duty either in addition to a revenue duty or in place of revenue duty. The main reason is that there is no security of protection in a revenue duty as such, as it is liable to change according to the revenue exigencies of the Government. A protective duty on the other hand requires the sanction of the Legislature for any change, however slight it may be. The Committee, therefore, are strongly of opinion that the present revenue duty should be turned into a protective duty.

2. The indigenous manufacture in this country has at present to face two kinds of competition, one from outside, and one from the Swedish combine established in India with three or four factories at the principal Presidency towns during the last three years. Protection of the match industry, there-

fore, requires that the imports should be reduced, if possible eliminated, and similarly the Swedish combine should have its power of mischief curtailed. The Committee, therefore, suggest that the Government should ask the Swedish combine to get itself registered in India in rupee capital with a stipulation that 75 per cent. of its capital should be Indian-owned in its true sense and not by nominees and three-fourths of its directors should also be Indian, and the Company must be required to entertain Indian apprentices in their different factories. The Committee at the same time emphasise that Indian manufacture should be encouraged to be more efficient and as efficiency could not be maintained without competition, competition should be allowed in as free and great a scope as possible.

3. The aim and object of every protective measure is to so develop the industry as to make it afterwards able to maintain itself without any protective measure. The protection should not be such as to require spoon-feeding for the industry for ever. My Committee are not opposed *qua*, foreign capital but it must come on terms laid down by the Indian Legislature.

4. The President of the Tariff Board appears to lay stress upon the revenue considerations. The total revenue from the duty on imported matches has been as follows during the last three years :—

	Rs.
1924-25	1,13,91,275
1925-26	1,13,18,556
1926-27	88,63,592

It will be found that the duty dropped down considerably last year and the problem is apparently troubling the Tariff Board as to how to get this loss to the Government revenue made up. My Committee beg to submit that these revenue considerations should not weigh at all with the Tariff Board. Their duty is to find out what protection is necessary for any particular industry with regard to which they are conducting their enquiry. It is again drawing a red-herring across the trail to say that because the Government revenues are suffering particular measures of protection could not be adopted. It is greatly misleading to point out to our attention merely to the income derived from a particular revenue duty. If an industry is afforded a satisfactory measure of protection the loss to the Government revenue will be made up in more ways than one. Thus the Government can get super-tax, income tax and the like taxes from a prosperous industry which will also contribute largely to the increase in railway freight and forest revenue, pay increased cesses for loans etc., increasing the purchasing power of a large number of people enabling them to pay more in the shape of indirect taxation on different articles, etc. These are different principles of protectionist economics and they apply to the match industry as strongly as they do to any other industry. My Committee presume that they will meet with the acceptance of the Tariff Board.

5. The President of the Tariff Board in his remarks while discussing the method of establishing a monopoly in the manufacture and sales of matches assumes that the Swedish Trust backed by vast capital resources and long experience of manufacture and controlling the largest and best equipped group of factories in the country can indisputably produce a standard article of good quality at a low price.

6. These arguments can however be replied to by saying that if the Trust is so very big and powerful as to have successfully monopolised the Match Industry in various other countries and even in Japan, it is all the greater reason why we should try to get rid of it rather than allow it to have a stronger footing in the country. As suggested before, the Trust should be required to have itself registered in this country in Indian capital. A licensing system should be introduced and restrictions should be imposed on the production of different manufacturers by assigning them a particular quota of production for each. The Swedish Trust will have to be given its own quota. My Committee suggest that this quota should not exceed their three years' average outturn in India and Burma and at any rate not more than 25 per cent. of present local manufacture and it should also be provided that this quota as given to the Swedish Trust

should be reduced every year eliminating automatically the Trust in about five years, unless they in the interval comply with all the requirements laid down by the Indian Fiscal Commission, considering the fact that they have created vested interest in the country by erecting factories during only the last three years, that is to say their vested interests in the country are of a very recent growth. No licence should be given to any manufacturing concern 75 per cent. of the capital of which is not owned by British Indian subjects and 75 per cent. of the directors of which are not Indians. The Directors should hold their qualifications in their own name and capacity and not merely as nominees.

7. There should be a central sales organisation not run by the State but by a Joint Stock Company which should be treated like a public utility concern. It should have rupee capital entirely in Indian hands and the Directorate also should be entirely Indian. Precautions should be taken that capital does not go out too much into the hands of a few individuals. This organisation should control sales of matches whether manufactured locally or imported. It will be responsible for fixing the prices at which productions of manufacturers are to be purchased. The price may be fixed on the basis of cost price *plus* a certain percentage of depreciation and interest on capital employed. Such a price will have to be fixed for each manufacturer separately and my Committee would suggest that the period for which it should hold good should be three years. If any manufacturer cheapens his cost of production, he is welcome to do it and the advantage will go to him.

8. In order that the sales organisations may not be a profiteering one, the price which it generally charges to the consumer should be fixed on the basis of expenses for distribution *plus* a certain percentage, *viz.*, 8 per cent. per annum. The existing duty on imported matches to be continued and may be increased if found necessary.

9. The Directorate of the selling organisation should consist of:—

- (1) 1 Government officer.
- (2) 2 representatives of Match manufacturers.
- (3) 4 representatives to be elected by shareholders.
- (4) 2 representatives elected by the Federation of Indian Chambers of Commerce.

10. The Press Note issued by the Tariff Board suggests that on economic grounds the match manufacturing industry as a cottage industry will disappear through being unable to stand against the competition of machine-made matches which will have naturally a mass production. Japan may be cited as an instance of how match-manufacturing as a cottage industry will not be able to stand against the modern machine-made matches.

11. The question of Indian States as far as the manufacture of matches in their territories is concerned remains to be solved. It is a complicated question involving various political and other considerations. My Committee while not giving their suggestion as the last word on this question believe that there is a workable solution of this problem. What my Committee suggest is that just as the Central Sales Organisation is proposed to be entrusted with both the regulation of imports and the regulation of production and the regulation of sales, it should also be entrusted with the work of receiving matches from Indian States and assuming the responsibility for their sale also. Unless this is done the whole object of the sales organisation may be frustrated owing to heavy imports which may come in from unlicensed and unrecognised match factories which might spring up to a large extent in Indian States.

Match Manufacturers' Association, Bombay Presidency.

Letter dated the 27th January 1928.

In continuation of my letter dated the 8th December 1927, I have the honour to further address you on the subject under reference.

The Committee of the Association have very carefully considered the proposals contained in the Tariff Board's letter of the 5th December last and have come to the conclusion that the Match industry cannot be developed on sound lines unless the present import duty of Re. 1-8-0 per gross is transferred from the Revenue schedule to the Protective Tariff schedule. This step will give the necessary stability to the industry, as a protective duty cannot be altered by the Executive without the sanction of the Central Legislature, while a Revenue duty is liable to be altered by the Executive and thus the Revenue duty cannot afford that security of protection which an industry in its first stages of development requires.

The Tariff Board seems to be rather anxious about the loss in the Revenue sustained by the Government of India under the present Revenue duty which has the effect of protecting Tariff in reducing the import of foreign Matches. This duty has indirectly reduced the revenues of the Government of India by about 80 lakhs. My Committee submit that though the Government of India, while directing the Tariff Board to investigate the question of granting protection to Match industry, have embodied in their terms of reference the question of finding ways and means of recouping the loss that would be sustained by the reduction of imports of foreign matches, the principal consideration of the Tariff Board ought to be to investigate the main question whether the industry fulfils all the three conditions laid down in para 97 of the Report of the Indian Fiscal Commission and, if it fulfils all these conditions, to Report on the protective measures that would be required for the industry to be developed on sound economic lines. The question of recouping the losses ought not to weigh really with the Tariff Board in any of their inquiries, as it is an undisputed fact that an industry after being protected and developed is sure to make good the loss in a number of indirect ways and the improvement of the general economic condition of a greater number of persons in the country. The Committee have not, however, lost sight of the possibility that in case of protection being given to the industry there is bound to be some loss of revenue and therefore they suggest that if the Government, in order to make up the revenue must seek relief from the match industry, the Government may obtain a Royalty not exceeding annas eight per gross from the Central Sales Organisation hereinafter referred to, provided always that the existing import duty be simultaneously raised to the extent of such Royalty.

The President of the Tariff Board in his remarks while discussing the method of establishing a monopoly in the manufacture and the sales of matches assumes that the Swedish Trust backed by vast capital resources and long experience of manufacture and controlling the largest and best equipped group of factories in the country can indisputably produce a standard article of good quality at a low price. Whereas my Committee do not desire to dispute their vast resources and their experience and capability in the manufacture of a standard article of good quality at a low price, they suggest that such vast resources are not essential to the manufacture of a good sound merchantable match at an economic price. They further submit that such resources form a real menace to the industry in India, inasmuch as it helps the Swedish Trust to enter into unfair competition with the Indian concerns, who even with their limited resources are quite able to turn out such a standard of article of good quality at a fair price and against whom the Swedish Trust would not be able to hold its own were it not for the vast resources above referred to. It is because of these resources at their disposal whereby the Swedish Trust have successfully monopolised the Match industry in various countries and have secured a sound footing even in Japan, that the Committee have greater reason to insist that the Board should not fight shy of the Trust but should try to get rid of them rather than allow them to have a stronger footing and to create vested interests in the country. My Committee therefore suggest that the Board should recommend the introduction of a licensing system under which all the present factories should be licensed and that the quota of each factory should be fixed according to the production and capacity of each factory. When determining the quota of Ambarnath and other factories controlled by the Swedish Trust, consideration should be given to the fact that by systematic price-cutting during the last three years, they

have compelled the Indian owned factories to curtail production whereas they have themselves gone on increasing their own production. In the circumstances and in view of the fact that their vested interest in the country are of very very recent growth, having been created by erection of factories here not more than three years ago, the Committee suggest that the average of their production during the last three years and not their present production—should be made the basis on which their quota should be fixed and that such quota should be so reduced annually as to lead to their total elimination in five years, unless in the interval they shall have been made genuinely and effectively to comply with all the requirements laid down by the Indian Fiscal Commission. It is really a matter of regret that a foreign concern like the Swedish Trust should create vested interests in this country to the detriment of one of India's main industries. India, as a component part of the British Empire, ought not to allow any foreigner to supply her requirements of a necessity of life like matches which in peace time she can with proper efforts manage to manufacture in all departments independently of foreign aid and supply herself. If possible, India, with her vast forest resources, ought to aspire to cater for the needs of the entire British Empire and make it independent of foreign matches in emergencies as well as in normal times. No license should therefore be given to any manufacturing concern 75 per cent. of the capital of which is not owned by British Indian subjects and 75 per cent. of the Directors of which are not Indians. The Directors should be in their own name and capacity and not merely as nominees.

The Committee further suggest that the Tariff Board should recommend the formation, with its own share capital, of a Central Sales Organisation, which should be treated as a public utility concern. It shall have rupee capital entirely in Indian hands and the directors shall also be Indians. A minimum of 25 per cent. of this capital shall be reserved for subscription by Indian Match Manufacturer and precautions be taken that the remaining capital does not go into the hands of a few individuals. It will be responsible for fixing the price at which productions of manufacturers are to be purchased. The price may be fixed on the basis of the cost price *plus* a certain percentage for depreciation and interest on capital employed. Such a price will have to be fixed for each manufacturer separately and should hold good for at least three years. If any manufacturer, meanwhile, cheapen his cost of production, he may be encouraged to do so and to enjoy the extra profit.

In order that the organisation may not be a profiteering concern, the price which it may generally charge to the consumer should be fixed on the basis of expenses for distribution *plus* a certain percentage, *viz.*, 8 per cent. per annum. The Directorate of this organisation should consist of:—

- 4 representatives to be elected by the Shareholders.
- 2 representatives of match manufacturers.
- 2 representatives to be elected by the Federation of Indian Chambers of Commerce, and
- 1 Government nominee.

My Committee with a view to help the proper working of the organisation suggest that local advisory Committee in each Presidency town should be formed to advise the Central Sales Organisation regarding the fixing of purchase and sale prices of matches. These bodies should consist of a nominee of the Government, a nominee of the manufacturers and a third member representing the Local Indian Chamber of Commerce.

As regards factories situated in Native States, considering the amount of trouble that the trade has already had through illicit rebates given to importers by some of the Native States, and the additional imposition by them of prohibitive duties (as much as 50 per cent. in some cases) on Indian manufactured matches entering their States, the Committee suggest that imports of matches from Native States into British India be made to pay the same duty as foreign imported matches and that the administration of this import duty on Native State Matches entering British India be on the lines of the organisations controlling the imports of salt and liquor into British India.

Rangoon Trades Association.

Letter No. 53-G., dated the 30th January 1928.

I am in receipt of your letter, dated 5th December 1927, asking for expression of commercial opinion on the Match Manufacturing Industry in India. The Members of this Association do not approve of Government interference in any form, unless it can be proved the so-called Swedish monopoly charges prices which may be considered exorbitant.

The Punjab Trades Association, Lahore.

Letter, dated the 1st February 1928.

I have the honour to acknowledge receipt of your letter No. 946-A., dated the 5th December 1927, asking for an expression of the views of this Association on certain points arising out of the enquiry into the Match Manufacturing Industry in India.

2. In reply I beg to say that the papers have been considered by my Committee and I have been instructed to say that the members are of the opinion that the Swedish Match Trust has undoubtedly obtained an almost controlling interest in the Match Industry in India. The reason for this my Committee thinks is not far to seek, and lies in the fact that indigenous matches are of such inferior quality that they can make no headway against the imported article. No measures under the present conditions of the industry can stop the elimination of the smaller factories, and there is a danger of the larger ones also going to the wall in time unless they are able to turn out an article as good as the imported product. The Indian, my Committee consider, has it in his power to put up all the capital to adequately finance the industry, and there is, they think, a colossal amount of idle money in this country, and if he has faith in his venture and a fixed intention to produce a standard of quality that will compete on favourable terms with the Swedish Trust Match he has nothing to fear. The inclusion my Committee think on the Board of Control of one or two Government technical and financial experts would they consider ensure continuity of endeavour. By this means the national character of the industry would be preserved, over-production avoided and Government would receive an adequate revenue from the industry. Until such time therefore as India is prepared to invest its own capital in the industry there seems to be no object in discouraging foreign capital.

3. I am to say that my Committee do not consider an excise duty on matches advisable until the Indian article is able to compete with the Swedish in quality. Protection, or any measure to discourage the Swedish industry, would at the present time, or in the near future, have disastrous effects, and my Committee think that the Indian manufacturer should learn how to make matches before he asks for special concessions. This should not present any insuperable difficulty as under the tutelage of European experts the Indian labourers employed in factories should improve in their practical knowledge and skill and should be better fitted to claim match manufacture as a national industry requiring protection.

4. My Committee think it is very difficult to pick and choose between the different methods suggested by the Tariff Board. The matter is one for experts, but the compulsory employment of a large proportion of Indians and of the use of indigenous raw material should be the *sine qua non* of any scheme having in view the improvement of the match industry. Let Government start the factories and work them under experts until such time as they are in a position to compete with Swedish matches in quality and then hand them over to Companies or syndicates to be run as private concerns. (Take the Turpentine factories as an example.)

5. The German method also seems to my Committee to be workable, quality and price control being an essential point of the scheme. Mass production in well-equipped factories turning out an article equal to or better than the Swedish is the solution of the difficulty. Until this occurs it is my Committee think futile to talk of protection and excise regulations.

Licensing of factories will be necessary with reasonable and workable conditions—Quality, efficient equipment and expert personnel being the chief points to be kept in view.

Maharashtra Chamber of Commerce, Bombay.

Letter, dated the 1st February 1928.

I am to address you as follows:—

Without in any way going into the details of the question, the Committee of this Chamber wants to make a few broad suggestions to the Tariff Board having considered both the questionnaire and the observations made by the President of the Tariff Board on this subject.

The Committee thinks that the Indian match industry satisfies the three general conditions laid down by the Fiscal Commission in their report (paragraph 97). There exist in the country natural advantages such as most of the raw materials, cheap and plentiful labour and a big market at hand. The industry has grown recently owing to the big revenue duty but it is threatened now by foreign competition and on account of internal competition from the Swedish group of match factories. If protected in its infancy it will stand open competition when it has developed and gathered strength. It will ultimately be able to produce the whole of the country's match requirements. If any industry is to have any protection at all, it must have an adequate measure of protection. What exactly will be an adequate protection will depend upon the nature and the circumstances of the industry and in this case the action of the Swedish group.

The match industry of this country at present has to face competition from without as well as from within the country. There is the powerful Swedish combine having its factories in different parts of India operating with a view to secure a monopoly. Looking to the history of the Swedish Trust in other countries of the world, the Tariff Board is inclined to say that its presence is an advantage to this country inasmuch as it has up-to-date machinery, vast resources and experience and in that it can be of help to us to better the quality of our matches.

If the trust is so big and powerful as to have secured a dominant interest in some European countries and even in Japan there is all the greater reason for not allowing it to have its own way here, its growth is recent and it cannot be reasonably said that any very old vested interests have been created. If the purchase of the trust be not possible a licensing system should be established for the match manufacture together with the fixing up of a quota of output for each match factory. In this arrangement the Swedish Combine should also be allowed its own share of the total match supply (looking to their average of output for the last three years) with the stipulation that this quota should every year be reduced 5 per cent. or 10 per cent. thus automatically eliminating it in a few years' time. They should not, under any circumstances, be given more than 25 per cent. of present manufacture and none in the future manufacture or expansion either.

The Swedish Combine can continue here, if it elects to do so, provided it agrees to have a rupee capital not less than 75 per cent. of it being really Indian and a Directorate not less than 75 per cent. of which is really Indian.

There should be a central sales organisation. It should be a Joint Stock Company with an entirely Indian capital and an Indian Directorate which should include among others one representative of the manufacturers, two of the Indian Chambers of Commerce through their Federation, and one of the Government. A fair purchase price should be fixed taking into account

the cost of production, depreciation, interest on capital, etc., and it should be subject to revision every three years. If a manufacturer reduces his cost of production in that time the advantage should be his. This organisation should add to its purchase price the cost of distribution and have on that all a profit of not more than say 8 per cent. This central sales organisation should be the sole distributor of all matches imported as well as those produced here. The revenue duty of Rs. 1-8 per gross which at present exists on the imported matches should be enhanced, if necessary, and in any case it should be removed from the revenue schedule and declared a protective duty.

The loss of revenue to Government should not influence the Tariff Board as the loss will be made good in other ways by a thriving indigenous match industry. It will yield to Government an increase in the super-tax, and income-tax, an increased railway freight and an increased foreign revenue, etc., apart from the improvement of the economic condition of a large number of people and the consequent betterment of their buying capacity.

The Committee of this Chamber agrees generally with the view of the Tariff Board that match industry as a cottage industry will gradually disappear in course of time in competition with the machine made matches on mass production basis.

The Buyers and Shippers Chambers, Karachi.

Letter No. 334, dated the 1st February 1928.

In continuation of this Chamber No. 350, dated the 19th March 1927, I am directed by my Chamber to state as under:

1. In paragraph II of my previous letter cited above, this Chamber have explicitly pointed out as to what would be the right angle of view the Government should take in this behalf, which if taken the Government must needs encourage the match industry which is calculated to ultimately lead to the prosperity of the country regardless of its temporary adverse effects on the revenues.

2. In paragraph IV of the same letter, this Chamber have drawn attention of the Tariff Board to the urgent necessity of all possible protective measures to be adopted with a view to elevate India's present standard in arts and industries; without which every enterprise in this behalf is bound to meet with failure as a result of confrontation from outside competition. Moreover, revenue duty is subject to enhancement or reduction in consideration of increase or decrease in the revenues whereas the question of a protective duty is purely one for legislature. Hence the urgent necessity for imposing a protective duty.

3. As regards the assumption of the President of the Tariff Board with regard to the Swedish Trust producing a standard article of good quality at a low price, it being backed by vast capital resources and long experience of manufacture, my Chamber would rather use this very assumption as the best argument why we should employ all possible means to nip this monster in the bud, rather than allow it to gain a stronger footing in the country. In the opinion of this Chamber a licensing system with restrictions upon the production of various manufacturers will not fail to remedy the evil. Moreover, licenses should be restricted only to concerns with rupee capital and 75 per cent. of whose capital be of British Indian subjects and 75 per cent. of the Directors whereof be Indians as laid down by the Indian Fiscal Commission.

4. This Chamber further strongly supports the proposals of the Indian Merchants' Chamber, Bombay, contained in paragraphs 7 to 11 of their letter No. 201, dated the 24th January 1928, to your address regarding establishment of a Central Sales Organisation which as suggested by that body should also be entrusted with the work of receiving matches from Indian States and of assuming responsibility for their sales as well.

Chamber of Commerce, Bombay.

Letter dated the 6th February 1928.

I am directed to refer to your circular No. 946-A. of the 5th December last, forwarding a copy of the remarks made by Sir Padamji P. Ginwala in resuming the enquiry into the Match Manufacturing Industry in India and requesting an expression of the Chamber's opinion on consideration of general policy and in particular as to how far it considers a system of Government monopoly in matches is desirable both in the interest of the industry and of the country in general.

2. Generally speaking this Chamber is opposed to any form of Government interference with trade and industry which it holds should, as far as possible, be restricted to the collection of revenue. It would therefore be disinclined to favour any of the measures suggested in the letter under reference unless it can be shown that the danger from the operations of the Swedish Trust is very real and that the Indian Match Industry is deserving of protection. In the opinion of my Committee neither of these contentions have been proved.

3. The Tariff Board appear to be obsessed with the fear that the financial power, better organisation and superior quality of output of the Swedish Match Company is going to result in the extinction by competition or purchase of a nascent indigenous industry. My Committee consider that what the country wants is the best possible article at the lowest possible price. The ability of the Swedish Match Company to manufacture matches superior in quality to those of the smaller Indian factories does not appear to be disputed. The fear is expressed that the Swedish Match Company may obtain a practical monopoly of manufacture. Whilst, generally speaking, the Committee are not in favour of monopolies, they would view with equanimity the supremacy of the Swedish Match Company among manufacturers in India provided it turned out matches of a quality and at a price to satisfy the demands of the consumer. The fact that the smaller and less well equipped factories are finding that their output is being eliminated from the country market by the Swedish Match Company *prima facie* shows that the manufactures of the latter are better and cheaper. The policy of the protection of an article inferior and dearer to that which can be obtained elsewhere by the consumer cannot surely be economically defended.

4. Nor are my Committee convinced that the present policy of the Swedish Match Company is altogether detrimental to the interests of this country. As Sir P. Ginwala states on page 5 of his remarks it does not appear to be its policy to create an entirely foreign monopoly in any country in which it carries on its business. It tries to get as much capital as it can from the country subject to its own ability to maintain its control; it also appoints Indian Directors or Directors of the nationality of the country in which it operates; it will obviously employ mainly local labour and, as far as possible, use Indian materials. If this is so the factories under its control will undoubtedly be more efficiently managed, employment of local labour will be regular and presumably well paid, and the tendency will be to prevent the growth of unsatisfactorily managed concerns which, as evidenced not only in India but in other countries, are more in nature of an incubus than anything else. If at some future time the Swedish Match Company attains a position of such dominance as to be able to demand its own price and is tempted to profiteer this danger will probably be met by competition from Japan, which country would doubtless seize an early opportunity of regaining the trade, a large portion of which was in its hands a few years ago.

5. The Chamber is asked whether it considers that a monopoly in the sale of matches could be formed and, if so, whether such a solution would prove satisfactory. An instance of the successful working of this form of monopoly is quoted, but it is not at all certain that such a system would be as successful in this country where the opportunities for evasion are so much greater as in a country whose inhabitants are notoriously amenable to methodical regulations such as this would entail. Furthermore, an army of subordinate Gov-

ernment employees would be created throwing an additional burden on the taxpayer. In regard to the general principle of State monopolies the Chamber stated in evidence before the Indian Taxation Enquiry Committee that it would not recommend an extension of the monopoly system.

6. Reverting to the question of protection, my Committee fail to see any serious reason in favour of protecting a local industry which is unable to satisfy the conditions laid down by the Fiscal Commission in paragraph 97 of their report, inasmuch as there is insufficient raw material in this country to supply its needs and the industry is not one which will eventually be able to face world competition without protection. I am to add that in the opinion of my Committee the question of protection should be kept strictly separated from the question of making good the losses in revenue caused by the decline in the import of matches. Looking at the matter from the latter point of view the simplest and most effective way of collecting revenue would seem to be by means of import duty on the imported articles and my Committee consider therefore that it is desirable to retain some portion of the import trade or at any rate so to scale the duty as to enable the imported match to enter when the price of locally made matches rises above average world prices, thereby providing an automatic safeguard against an abnormal rise in the price of a commodity in universal use.

7. I am to express regret at the delay which has occurred in replying to your letter.

Bengal Chamber of Commerce, Calcutta.

Letter dated the 7th February 1928.

I have the honour to acknowledge the receipt of your letter No. 946-A, dated the 5th December 1927, forwarding a copy of the remarks made by Sir Padamji Ginwala, the President of the Tariff Board, in resuming the enquiry into the Match manufacturing industry in India, and inviting an expression of the opinion of the Chamber on the points raised in these and in your letter.

2. It appears that questions have been raised, in the course of the Board's enquiry, involving considerations of general policy. These arise principally on account of the activities of the Swedish Match Trust, which has in recent years obtained a dominating interest in the match trade of nearly every country; and the Trust is said to aim at a similar position in India. Reference is made, in the papers, to the undesirability of allowing a situation to come about under which the Trust, or for that matter any firm, or company can establish a monopoly. As the danger of monopoly at present threatens from a foreign firm an excise duty on the foreign capital employed has been suggested. Objections to this course are the absence of data to show what amount of excise duty would suffice to prevent unfair competition, and the probability that the threatened imposition of an excise might result in the Trust immediately beginning a price war, or alternatively buying out its larger factories; in either case a practical monopoly would be effected and the special excise passed on to the consumer. There is, further, the possibility that the Trust, complying with all the requirements of the law regarding Indian capital, would not be liable to the excise, although retaining practical control of policy.

3. To meet the situation, the establishment of a regulated monopoly is suggested, and the action taken by European countries, with regard to the Swedish Trust, is quoted. The following are possible courses:—

(a) *A monopoly in manufacture and sale given to the Trust in return for an annual payment to Government, the Trust being bound to comply with prescribed conditions relating, for example, to the employment of Indians, the issue of rupee capital, quality and price of goods, etc.* A system on this basis is in force in Greece and Poland, where the Trust has a monopoly.

(b) *A Government monopoly both of manufacture and of sale, as in France.* This system is open to the usual objections to State manufacture.

(c) *A monopoly in sale, manufacture being carried on by private agency.*—Sales could either be (i) entrusted to a separate organisation, or (ii) retained in the hands of Government.

(i) *Sales entrusted to a separate organisation*, to which a monopoly would be given. This system is in force in Germany, the capital and control of the selling syndicate being in the hands of the manufacturers. Quotas of production are fixed for each manufacturer but Government retains the right to control the price, and also issues licenses for factories and extensions. A similar organisation in India would be difficult because of the great number of match factories and the variation in their capacity; the Board suggests however that a sales corporation might be organised independent of the match manufacturers, the prices of its purchases and sales, and the proportions of purchases to be made from different factories, being fixed. Until the establishment of the corporation Government might administer the monopoly through its own agency with the assistance of an Advisory Committee.

(ii) *Government monopoly of sales.*—Restriction of manufacture by means of licensing would still be necessary, as Government could not agree to purchase to an unlimited extent; the price at which Government would purchase would be fixed. In selling, Government wholesale depôts might be established or a system introduced similar to that of some excise departments for the sale of country liquor; this latter method however is cumbrous.

4. The Committee of the Chamber have considered it desirable that they should state, as they have done in the preceding paragraph, the courses that appear to be available on the assumption that some such action is expedient to meet the possible danger of allowing the Swedish Trust to establish complete control over the match industry, and the sale of its products, in this country. But the Committee are not convinced that any of these courses will be in the best interests of the people of India. They are not satisfied that, as a matter of general principle, a practical monopoly is in itself necessarily an evil, provided that those in control supply the public with an article of quality at a reasonable price. It is only when those in control of a monopoly abuse their position and charge exorbitant rates without any intention of extending or increasing their business that, in the opinion of the Committee, the need to interfere with them arises.

5. Regarding the present question from the point of view of these general principles, the Committee are unable to see that any real reason has so far been established for Government interference with the enterprise of the Swedish Match Trust. The organisation of the Trust is so extensive that they are able to supply the public with good matches at comparatively cheap prices, and it has to be remembered that the purchase of cheaper matches of inferior manufacture is not necessarily a matter of economy. The papers before the Committee recognise that the Trust, if it succeeded in establishing control in India, would manufacture its products in this country from Indian materials and with Indian labour. Much of the capital employed would almost certainly be Indian capital and with regard to the rest it is, in the opinion of the Chamber, to the advantage of India to attract as much foreign capital as possible to assist in her development.

6. It follows, from what has been said above, that if, in order to forestall the possibility of an abuse of position on the part of the Swedish Trust, it should be deemed expedient to adopt one of the alternative courses mentioned in paragraph 3, the one which the Committee of Chamber consider would perhaps be open to the least objection would be the first, namely, that a monopoly in manufacture and sale should be given to the Trust in return for an annual payment to Government, conditions being prescribed which the Trust would be bound to observe. The objection to this course is stated to be that its adoption would mean that match manufacturing would cease as a national industry, and that, on grounds of sentiment alone, such a proposal affords no practical solution to the problem. The Committee are of opinion that it is possible to give too much weight to sentimental considerations in matters of this kind. The position would admittedly be entirely different if the danger that threatened was that match manufacture in India would

altogether cease, and that India would therefore be dependent solely on imports for her supplies of matches. But this issue does not arise, for any terms made with the Swedish Trust would, as is stated above, provide for the continuance of manufacture in India on a scale that would form part of the arrangement. To all intents and purposes, indeed, the industry would continue to be a national one, for manufacture would continue in this country with Indian labour, Indian materials and, to a considerable extent, Indian capital.

Indian Match Manufacturers' Association, Calcutta.

Letter dated the 7th February 1928.

Referring to your letter No. 101, dated the 26th ultimo, I delayed in sending you copies of the Report, asked for, waiting to have it finally passed by the Association. It was passed yesterday at our annual meeting with the following amendments:—

- “ That the Tariff Board be requested to recommend the transference of the duty on imported matches from the Revenue to the Protective category.”
- “ That the Tariff Board be requested to recommend that, for reasons already explained by the Association in their previous correspondence, the duty on imported matches be raised from Re. 1-8 to Re. 1-12 per gross.”
- “ That the Tariff Board be informed in the opinion of the Association there should be no control on the production of any match factory, manufactured for export outside India.”

Six copies of the Report as requested are herewith forwarded.

Enclosure.

INDIAN MATCH MANUFACTURERS' ASSOCIATION.

REPORT ON THE ESTABLISHMENT OF A MONOPOLY OF SALE OF MATCHES, PROPOSED BY THE TARIFF BOARD.

(Passed by the Executive Committee.)

We, the members of the Sub-Committee, appointed by the Executive Committee of the Indian Match Manufacturers' Association to consider letter No. 946-A, dated the 5th December 1927, and its enclosure, from the Secretary, Tariff Board, beg to submit the following Report which has been prepared after a very careful consideration of the various issues.

Broadly speaking the following proposals have been made in the letter and its enclosure, referred to above:—

- (i) The handing over of the monopoly, both of the manufacture and sale of matches, to the Swedish Trust under certain conditions.
- (ii) The establishment of a Government monopoly for the sale and manufacture of matches in India.
- (iii) The establishment of a monopoly of sale to be entrusted to a separate Sales Syndicate or to Government, manufacture being carried on by private agency and production, etc., regulated by license.

These proposals seem to have been suggested as simpler and more effective substitutes for those made by this Association and by others interested in the industry, namely, the imposition of an excise on the products of factories in India financed by foreign capital. But, in our opinion, they are calculated to give rise to complications of a far more serious nature.

It appears that what the Board apprehends is that the adoption of the measures proposed by us would create difficulties in the way of realising the excise from factories liable to pay it. The buying up of factories belonging to the Indians by the Trust or the conversion of the sterling into rupee capital, which the Board apprehends, may give rise to this possibility but, once more, we cannot agree that the measures, recommended by us and endorsed by every manufacturer, who has approached the Board for recommending protection for the industry, will not be the best thing that could be done to save the situation.

With regard to our particular industry everyone knows who the party is against whom we mainly desire protection, and knowing full well that no fiscal measure can work without hitch and risks of evasion, which may demand further legislation from time to time, we cannot consider that the measure proposed by us, which is on the lines of what is actually being done in other countries, as being impracticable.

No legislation absolutely fulfils the object for which it has been conceived and if there may be cases of evasion it does not prove that the law itself has no utility and, in the same manner, we propose that our suggestions should be given a fair trial.

But if the authorities do not approve of our proposals, though they are supported by the whole body of Indian manufacturers in the country and public opinion at large, we must, as a matter of necessity, have to seek solution by other plans. It must, however, be clearly understood that if we now discuss a different plan we do so on that understanding alone.

The first and the second measures, discussed in the letter, referred to us for our consideration, seem to have been dismissed by the Board itself, as being unsuited to the conditions of the country, and we are of the same opinion for more reasons than those mentioned in it.

The only measure that the letter lays special emphasis upon and dwells upon at a great length is the third one which promises to remove the danger of cut-throat competition. If prices are fixed, allowing a moderate margin of profit to the manufacturer and the output is sold at a fixed price, it would create the atmosphere of security for which the Indian manufacturers are clamouring all these years. It also promises to neutralise the risk of the prices being raised by any firm or combination of firms by the creation of monopolistic conditions.

But there are certain aspects of the plan, as presented to us by the Board, which cause us grave misgivings. If, however, the scheme is thoroughly re-cast altering the features we have reason to fear, it may be given a trial.

The question of the creation of a Sales Organisation at once gives rise to a number of serious problems which should be very carefully considered and for everyone of which a satisfactory solution must be found before the manufacturers may be expected to lend their support to it.

One of them is that of fixing output for each factory. The matter has been thoroughly examined by us from various points of view, but we admit it is difficult to find a solution that may eliminate every chance of hardship.

It cannot be based on capital outlay; one manufacturer might have invested a lot of money, but owing to certain disadvantages might have failed to attain a proportionate output. Another might not have been able to command sufficient labour. And yet another's difficulty might be due to want of proper transport facilities and so forth. One, on the other hand, having invested a less capital might have had all these and other advantages and a larger output in consequence.

The equipment of a factory cannot either be considered as an infallible basis of calculation. There are factories equipped with second-hand machines

which are more for purposes of a show than for any practical utility, for, they often get out of order and cannot assure a fixed quantity of daily output.

We are of the opinion that, as the best way out of the difficulty and as workable basis, not altogether divorced from what is equitable, one could accept for this purpose the statements regarding the capacity of the maximum output as supplied to the Tariff Board by factories. For instance, factories A, B, C and D, in their written statements, mentioned that their capacity was 1, 2, 3 and 4 respectively. Now, assuming that there is over-production and the effective demand is only 5, the factories should be allowed to manufacture only $\frac{1}{2}$, 1, $1\frac{1}{2}$ and 2 respectively.

There is another point we must explain in this connection. Our original proposals sought to place certain restrictions on foreign undertakings in India. The proposed Sales Organisation, if it is intended to serve the best interest of the country, must provide for some such restrictions to be applied to these undertakings in order to give larger scope for the purely Indian concerns to develop and expand. It would have to be definitely laid down what proportion of the total demand in the country should be supplied by factories belonging to foreign capitalists. In our opinion, not more than one-fifth of the total demand should at first be allowed to be supplied by these factories and it should be gradually reduced to one-eighth, say, in course of five years, the purely Indian factories being allowed to supply the increased output, thus set free, or license granted to new factories, whichever course may be deemed best in the interest of the country.

Another problem arises with respect to small concerns. The proposal made in the 9th paragraph of the letter, namely, that "Such a system of monopoly presupposes that the factories undertaking manufacture are all well equipped and of reasonable size and it would, therefore, follow that the smaller factories would disappear." This principle, we beg to submit, is quite unsuited to the conditions of a country like India which has large population and no foreign market for its manufactured articles unlike other countries with less population and a large foreign market. India is industrially backward and this also strengthens the position of her small undertakings. They are, we beg to urge, the elementary institutions for the industrial education of the people of the country and, at the same time, they serve to relieve unemployment. On no account can we recommend any measures likely to restrict the field of small private enterprise. We have no unemployment insurance and our Government are not responsible to the people to find them means for subsistence.

In these circumstances we recommend that on no account should the small concerns be made to "disappear", but, on the other hand, they should be given every facility to surmount their difficulties, if possible, on the lines of what the Industrial Engineer to the Government of Bengal, Mr. S. C. Mitter, has suggested in his "Opinion on the possibilities of the development of Match Industry along cottage lines", dated the 10th February 1927. We should further recommend that in every Province the maximum output for such small factories and for each individual one of them should be fixed and we should provide a sufficient scope for them to develop. License should be given to them, if necessary, in consultation with the Indian Match Manufacturers' Association in regard to the quality.

The next problem is about quality, appraising and fixing of price.

The following points were considered by us.

Let the proposed Organisation issue 9 sets of common labels for three different sizes and three different qualities, assuming that the Organisation admits three qualities (namely, first class which, let us assume, would be made of first class white wood and would be impregnated; second class made of white wood and third class of coloured wood—it being definitely understood that chemicals should, in all cases, be first class). Let it be assumed that we have

only four factories under the Organisation, namely, A, B, C and D. The Organisation has a register of factories in which it has the following entries:—

Name of Factory.	Registration number.
A	1
B	2
C	3
D	4

Let each of the above factories use one common label for each size and one for each quality. But let the labels, issued to one factory, be distinguished from those issued to another by a number-mark, printed on them. For instance, A should have all his labels marked A 1, B 2, C 3 and D 4, signifying their respective registration number. So that if the quality of matches by any particular factory falls short of the required standard, it should be quite easy for the Organisation to identify the manufacturer thereof by reference to the number mark on the label.

It might be said that this system would give rise to difficulties. It might be contended that some of the factories which have established a reputation for their output would always have the preference, consumers recognising those manufactured by these factories by the number-marks and asking for them to the exclusion of all others.

But the whole plan is that sales would be controlled and, therefore, the preference of certain brands would have no other result than that of causing them to sell out first.

Since under the proposed system there would be no more danger of price-war, the manufacturers would have ample opportunity to improving the quality of their output.

If, however, any complaint regarding quality against any particular number or numbers was repeatedly received, the appraisers under the Organisation, who would have to be experts, would be deputed to inspect the factory or factories concerned, advise them in the matter and if they still fail to improve, it would be perfectly within the powers of the Organisation to penalise them. Rules, framed for the guidance of the Organisation, would provide for powers to deal with this and other contingencies.

The next problem is the control of imported matches. In our opinion license to vendors selling the products of Indian factories should be granted by the Sales Organisation and to those selling imported matches by Government in consultation with the License Department of the Organisation. But in any case import should not be allowed to interfere with the Indian Industry.

Finally, we propose to deal with the problem of the formation of the Organisation to be entrusted with the sale of matches.

This may be considered as the most important question on the right solution of which many things would depend.

A section of manufacturers is of the opinion that it should be on the model of a limited company, it being held by some that the shares should be limited only to manufacturers of matches, while others are of the opinion that they should be left open to the public.

For obvious reasons, specially in view of the further complications such a system would give rise to, we are not in a position to accept these views. We propose that the Organisation should have no other business except that of controlling the sale of matches and that it should be composed of as follows with a preponderance of manufacturers in it:—

- 1 Member nominated by each of the existing factories holding license. (It being presumed that a special Board be appointed for granting license for the first time by Government as a tentative measure before the Organisation is properly formed.)

2 Members nominated by the Indian Match Manufacturers' Association to represent the interest of small factories.

3 Members nominated by Indian Match Manufacturers' Association to represent the collective interest of the manufacturers.

Director or Directors of Industries of the province or provinces concerned or officials of their Departments, nominated by them.

4 Members nominated by the Federation of Chambers.

5 Members of the Legislative Assembly, elected by the non-official members to represent the interest of the consumer.

We recommend that for the whole of India and Burma there should be three organisations, i.e., 2 for India according to the constitution outlined above and one for Burma to be formed in accordance with the plan agreed upon by Government in consultation with the manufacturers concerned.

In India there should be one Organisation in Bengal and another in Bombay, the two principal match producing provinces of the country. Factories in other provinces would be given the option of joining either of the two Organisations.

There should be a central Organisation, represented by 3 manufacturer-members, elected by each of the two Organisations of India, and one by Burma. It would further contain two members, nominated by the Department of Commerce and Industries, Government of India, 2 by the Federation of Chambers and two members by the non-official members of the Legislative Assembly.

This body should ordinarily meet once a year in Calcutta and Delhi or Bombay in alternate years and would, among other business of general interest, allot the total quantity of matches to be manufactured by factories under each of three Organisations, it being understood that before it met the Government of India should supply it every year with necessary figures regarding the maximum requirements for the following year.

The Office of the Central Organisation might be located either in Calcutta or in Bombay which would form a part of the Office of the Sales Organisation of the Province where it might be located.

To expedite business, the Sales Organisations in Bengal and Bombay, which would necessarily be big bodies, would have a Working Committee each, consisting of not less than 13 members with at least 8 manufacturer-members. The scope of work of the Committee would be defined by the Organisation concerned, which might be modified from time to time in the light of experience.

It would be unnecessary to form such a Committee for Burma where the numerical strength of the Organisation would be too small to require the creation of any Working Committee.

Each of the Sales Organisations would have an office in charge of a salaried Secretary who would be assisted by a staff of subordinate assistants. There would be a number of appraisers and store-keepers under the Secretary who would be directly responsible to the Working Committee or the Organisation, as the case might be.

To avoid frequent re-organisation of the Sales Syndicates they might be elected at as long an interval as may be sanctioned by precedents in these matters.

These Organisations would be vested with full powers to deal with any question relating to the control of production, fixing of prices for the different qualities of matches, granting of license to factories and vendors which would be done annually—settlement of disputes between their officers and factories—subject to the condition that Government would charge an excise on the sale proceeds of matches at a rate to be mutually agreed upon, which would leave the Organisations sufficient funds for the maintenance of their various establishments and for meeting other expenses.

The Government would render all possible help for the formation of the Organisations and bear all initial expenses to be recouped from the Organisations by instalments after they had been formed and had started work.

They should be recognised as semi-Government institutions.

J. W. PETAVEL, (President).
 G. C. SEN GUPTA,
 (Bhagirathi Match Factory, Barnagore).
 T. N. GUPTA,
 (Karimbhoy Match Manufacturing Co.,
 Calcutta).
 U. C. GHOSE,
 (Bangiya Diasalai Karyyalay,
 Calcutta).
 S. C. BOSE,
 (Pioneer Match Factory,
 Dum Dum).
 K. C. SEN,
 (Honorary Secretary).

56, GAURIBARI LANE, CALCUTTA;
 The 30th December 1927.

Calicut Chamber of Commerce, Calicut.

Letter dated 10th February 1928.

MATCH MANUFACTURING INDUSTRY IN INDIA.

I have the honour to acknowledge receipt of your circular letter No. 946-A., dated the 5th December 1927 with enclosures on the above subject.

This was considered at a meeting of my Chamber held on the 28th ultimo and a copy of the resolution passed by the Cochin Chamber of Commerce on the subject was also read at the meeting.

I am directed to inform you that this Chamber is also opposed to any form of Government control and is in complete accord with the views expressed on the subject by the Cochin Chamber.

A copy of the Cochin Chamber's resolution referred to above is attached* herewith for your easy reference.

Indian Chamber of Commerce, Calcutta.

(1) Letter dated the 11th February 1928 to the Tariff Board.

I am directed by the Committee of the Indian Chamber of Commerce, Calcutta, to acknowledge receipt of your letter dated the 5th December 1927, and to send to you hereby their views on the same.

My Committee have very carefully considered the various points raised in your letter referred to above, and have arrived at the conclusion that, in the interest of the progress and prosperity of the Indian Match Manufacturing Industry, the present import duty of Re. 1-8 per gross on matches should be declared a protective duty, as in its absence owing to the uncertainty of its continuance, the prospect of this promising industry will be seriously jeopardised. My Committee further do not understand the anxiety of the

*Printed separately.

Tariff Board with regard to finding out the ways and means of making up the deficiency in Governmental revenue likely to accrue from the diminished imports of matches owing to the progress of the Match Industry in India. What the Board should really devote their attention primarily to is the investigation into the extent, method and manner of the protection necessary for the development of this industry on sound lines. The question of the method of making good the revenue losses should not at all be an important consideration for the Tariff Board. Besides, even though temporarily the Governmental revenues may be decreased, it is quite clear that as the industry makes headway and becomes prosperous it will yield revenue to Government in various other directions, *e.g.*, Income-Tax and Super-Tax, Freights, Forest Revenue, etc., and above all will increase subsidiary industries and the purchasing power of the people, which in turn will bring more revenue from indirect taxes. For these and other reasons, revenue considerations should not dissuade the Board from recommending adequate protection to the industry. My Committee would even then suggest that to make up any deficit in revenue, the Government may charge an Excise Duty, provided that the existing import duty on matches should be increased at least to the extent of the excise duty thus levied.

The President of the Tariff Board in the remarks made by him while discussing the methods of establishing a monopoly in the manufacture and sale of matches assumes that the Swedish Trust controlling the largest and best equipped group of factories backed by vast capital, resources and long experience of manufacture can indisputably produce a standard article of good quality at a low price. My Committee do not agree with the view that such vast resources are *sine qua non* for the production of matches of good quality, as is evidenced by the fact that in India matches of satisfactory quality and at a fair price are produced by other factories who do not possess such vast resources. However, the case becomes all the stronger why we should try to get rid of such a powerful foreign combine which controls the production of matches in various other countries of the world, and which threatens the existence of the indigenous match manufacturing industry by various methods.

My Committee would, therefore, suggest that the Tariff Board should recommend the introduction of a licensing system by which all the existing match factories in India should be licensed and a quota of production fixed in accordance with the present output and capacity of each individual factory. Similarly a quota shall have to be assigned to the factories belonging to the Swedish Trust also. In their case, however, it must be borne in mind that their quota should be fixed not on their present output, but on their average output for the last 3 years, because it is during the last 3 years that, by a systematic price cutting, they have compelled the Indian match factories to curtail their production whereas they have increased it. A provision should also be made for an annual reduction in the quota assigned to the Swedish Trust, so as to ensure its total elimination in a period of, say, 5 years. No new license should be given to any Manufacturing Concern, 75 per cent. of the capital of which is not owned by Indians and 75 per cent. of the Directorate of which is not composed of Indians.

My Committee are of the opinion that there ought to be a Central Sales Organization run by a Limited Liability Company which should be treated as a Public Utility Concern. They are definitely opposed to the State management of such Sales Organization. This organization should be entirely Indian in management and capital, and should control the manufacture and sales of matches, both local and imported. This Sales Organization should fix a price for the purchase of the productions of manufacturers, such price being fixed separately for each manufacturer and on the basis of his cost price plus a percentage of depreciation and interest on capital employed, provided that such price shall not be unreasonable having regard to the average cost of manufacture by Indians. This price should ordinarily hold good for a period of five years, and the benefit of any cheapening in the cost of production that a manufacturer may bring about during this period should go to him.

The Sales Organization should not be a profiteering concern. The price of matches charged to consumers should be fixed on the expenses of distribution plus a certain percentage not exceeding 8 per cent. per annum.

My Committee would suggest that the Directorate of this Sales Organization should consist of—

- (1) One Government Officer,
- (2) Two representatives of Match Manufacturers,
- (3) Four representatives to be elected by Shareholders,
- (4) Two representatives to be elected by the Federation of Indian Chambers of Commerce,

provided, however, that the last named six shall be persons not interested in Match Manufacture either as Agents or Directors.

The question of Indian Native States is complicated, involving as it does various political and other considerations. But to guard against the heavy imports of manufactured matches being smuggled into British India from Indian States or Foreign States, my Committee would suggest that Government should devise necessary safeguards and, if need be, impose a duty on such imports from Native States into British India, equal in amount to the duty on foreign imported matches.

(2) Letter No. C. 8/26, dated the 2nd March 1928.

As desired by you at the time of the examination of the representatives of this Chamber on the Match Industry question on the 13th February, 1928, I am directed to send you herewith the details of the Central Sales Organization Scheme proposed to be formed for the control, production and sale of matches in India.

My Committee have not been able to go into the details of the scheme with as great thoroughness as they would have desired to in view of the shortness of the time before them, but they hope that the scheme as submitted will, at any rate, serve as a basis for the establishment of such an organization.

Details of the Central Sales Organization for the control, purchase and sale of Matches in India.

1. *Name.*—The proposed organization for the control, purchase and sale of matches shall be called the “Central Sales Organization”. The term ‘Matches’ does not include pyrotechnics.

2. *Head Office.*—The Head Office of the Central Sales Organisation shall be located in the Presidency which has the largest production of matches in India.

3. *Directorate.*—The Directorate of the Sales Organisation shall consist of 1 Government officer, 2 representatives of Match manufacturers, 4 representatives to be elected by the shareholders and 2 representatives to be elected by the Federation of Indian Chambers of Commerce, provided, however, that the last named six shall be persons not interested in match manufacture either as Agents or Directors.

4. *Capital.*—(a) The original share capital of the Central Sales Organisation shall be Rs. 75 lakhs.

(b) The original share capital shall be divided into shares of Rs. 10 each and the shares shall be fully paid up.

(c) At the time of the original allotment, one share shall be allotted to each applicant qualified to hold shares and if the number of such applicants is greater than the total number of shares to be allotted, the allotment of shares between the applicants will be by lot. If the number of

applicants is less than the total number of shares to be allotted, the remaining shares shall be allotted to applicants who have applied for more shares than one and if the number of shares so applied far exceeds the number of shares to be so allotted, the same shall be allotted among the various applicants in a fair and equitable manner.

5. 20 per cent. of the said share capital shall be allowed to be invested in by the licensed Match Manufacturing concerns, 75 per cent. capital of which is owned by Indians and 75 per cent. of the Directors of which are Indians.

6. *Qualification of shareholders.*—(i) Only individuals will be qualified to hold shares in their names.

(ii) No person who is not an Indian and no private or Limited Companies or partnerships shall be registered as shareholders or be entitled to payment of any dividend in any share.

7. *Transfer of share capital.*—No transfer of the share capital of the Central Sales Organisation to non-Indians will be recognised.

8. *Voting power.*—Every registered shareholder shall have one vote only irrespective of the number of shares held by him.

PART II.

9. *Classification of matches.*—The Central Sales Organisation shall classify the matches produced in India in 3 divisions, A, B and C. Matches manufactured from Aspen or similar imported wood will be put in 'A' class; matches manufactured from Indian wood, e.g., Geneva, Papita and similar quality will be put in "B" class; and others which do not come up to the standard required for class "A" and "B" will be put in class "C" which will also include matches made from rejection splints.

10. *Purchase price.*—The purchase price of matches of each class shall be fixed by the Central Sales Organisation on the basis of the average of the cost of production in that particular class which will mean the factory cost plus 8 per cent. Such factory cost shall include depreciation on machinery at 10 per cent. but will exclude any interest on the capital employed.

11. *Assignment of Quota.*—The Central Sales Organisation shall fix quota for each licensed factory on the basis of its present output, except in the case of the Swedish Trust whose quota will be fixed not on the basis of their present output but on the average for the last three years; and their quota shall in no case exceed 20 per cent. of the total production of matches in India to-day. The quota of the Swedish factories shall be reduced annually by 20 per cent. so as to bring about its complete elimination at the end of five years. The increased output thus set free by the progressive reduction in the quota of the Swedish Trust shall be distributed *pro rata* amongst the existing factories.

Where, however, the increased output is set free as a result of the inability of a factory to supply the full quota assigned to it, the same shall be distributed amongst factories which are run with the greatest efficiency.

12. *Licensing.*—Licenses shall be issued to all the existing factories and no new licenses shall be granted for the period the duty on matches remains protective.

13. *Production and Sale of matches without license.*—Whosoever produces matches or sells matches, whether indigenous or imported, without obtaining a license therefor shall be punished with fine and imprisonment according to the laws of the land.

14. *Appraising of quality of matches.*—The quality of all matches supplied by the factories shall be valued once in every three years and manufacturers of matches, the quality of which fails to conform to the required standard shall, after due warning, be penalised by the Central Sales Organisation in such manner as they think fit.

15. *Sale price.*—The Central Sales Organisation shall be at perfect liberty to fix prices of matches in a manner calculated to bring to it a profit of not more than 8 per cent. on its capital.

16. *Depôts.*—The Central Sales Organisation shall have depôts for the stock and sale of matches in close proximity to the centres of production of matches.

17. *Native States.*—Matches imported into British India through the Native or Foreign States shall have to pay the same duty as is applicable to imports of matches from abroad.

Calcutta Trades Association, Calcutta.

Letter dated 11th February 1928.

I have the honour to acknowledge the receipt of your Circular letter dated the 5th December last together with enclosures as enumerated therein on the subject of the Match manufacturing industry in India, and under the direction of the Committee of this Association, who have since been able to give the various aspects of the case raised in your letter above referred to, their careful consideration have to put forward the following suggestions.

Briefly stated the main objects touched on in your communication are:—

- (1) to devise methods of preventing the exploitation of the country by a match combine,
- (2) to encourage the manufacture of matches in India by Indians as far as can be of indigenous materials, and
- (3) to raise revenue for Government.

The Committee do not think that there is much fear that any combine could raise the prices of matches in India to any great extent when Japan is so near, but its establishment might result in a lowering of quality, the use of foreign material, and the discouragement of any efforts to develop local supplies of raw material.

They further do not think that any action based on special excise duty against matches manufactured by Companies financed by foreign capital would be of any use as it would be so easy to evade.

They are of opinion that the establishment of a Government monopoly either of manufacture or sale is objectionable on many grounds. It would be cumbersome, expensive, and probably inefficient.

In respect to paragraph 8 of your letter the establishment of a separate sales organisation seems to the Committee to be quite unnecessary and must greatly increase the cost. In this connection they think it is inevitable that the less efficient factories (and in this category will probably be included most of the smaller concerns) must die out, and on the whole it is an advantage to the community in general that they should and there does not, therefore, seem to be any reason for making any attempt to preserve them.

Manufacture in bond under Government supervision does not commend itself to the Committee.

It is also to be stated that incidentally the curtailment of the number of kinds of labels would make no difference whatever for the labels of even the smallest used brand is printed in such large numbers that the initial cost of providing design, etc., has become negligible and the cost of the labels is just the printing and paper.

Of the systems set forth in the letter for preventing exploitation the one that is in vogue in Germany seems the soundest, but the following suggestions which seems to this Association as being likely to help in attaining the objects desired are:—

- (1) Standards of quality, particularly as regards stability, non-glowing properties, and strength of sticks, to be established. Labora-

tories for testing are already in existence. This would prevent unfair competition in a country where so few are educated.

- (2) All match factories to be specially licensed and license of any factory to be cancelled without compensation if the matches made there are not maintained at the standard of quality fixed. No factory shall be granted a license unless certain conditions (in which the provision of efficient machinery, employment of Indians, and use of indigenous materials wherever possible will be included) are fulfilled, and any factory already in existence will be given time to comply with the new regulations. Conditions of site will also be considered in granting licenses particularly with regard to climate, and proximity to cheap power and transport facilities. Probably the present factory Inspectors and explosive Inspectors reinforced by one expert would be able to efficiently control the factories.
- (3) An excise duty to be imposed on all matches. This they suggest may be collected by making it compulsory to print all labels on specially watermarked paper easily identifiable under Government supervision. Manufacturers may use whatever design they wish but the labels must not be smaller than a prescribed size to be arrived at after consultation with manufacturers. All labels of matches manufactured abroad to be also printed on similar paper and the customs would not allow importation of any matches not complying with this condition.
- (4) An import duty sufficient to bring the cost of imported matches equal to, or slightly over, wholesale selling price of Indian-made matches to be imposed.
- (5) Wholesale selling price to be fixed by Government, taking the average manufacturing cost and allowing a fair profit on the capital involved, etc. Retail prices might be left to find their own level. They are governed by local conditions of accessibility and demand and it would be difficult to fix fair prices under all conditions and well nigh impossible to enforce them.

The Committee further think that some legislation on these lines would give the public a good quality article at a fair price, and prevent any exploitation of the country by a foreign or any other combine inasmuch as the Government would control the quality, the wholesale selling rate, and the licensing of factories. The cost of administration of these measures should be very small and they should result in a very satisfactory revenue to Government. At the same time it would promote the use of indigenous material and encourage any efforts which may be made to make their extended use possible.

There is one other point which seems to the Committee to require guarding against and that is the possibility of the Swedish or any Company cornering or obtaining control of any of the chemicals or other ingredients which, so far as one can see, will always have to be imported. They have no knowledge as to whether this is likely to be a real danger, but it seems that this point is one that will require vigilance.

Cochin Chamber of Commerce, Cochin.

Letter dated the 13th January 1928.

With reference to your letter of 5th December last I have the honour to enclose a copy of a Resolution which was adopted by the Chamber at its meeting held on the 11th instant.

Match Manufacturing Industry in India.

"Resolved to inform the Tariff Board that this Chamber is opposed to any kind of Government control over manufacture or sales. The evils of Government monopoly are too widely known to require elaboration, but the best illustration thereof is probably offered by the French Match which is generally agreed to be an inferior and expensive product. The failure of Government control in Germany may also be instanced as a reason why its adoption should be avoided by the Government of India."

The Chamber is of opinion—

- (1) "That steps should be taken by Government to prevent the Swedish Trust exercising a controlling interest in the Indian Markets, at the expense of the Home Industry and ultimately of the consumer.
- (2) That the Import Duty on manufactured Matches should be maintained, and that a duty equivalent to that on manufactured Matches should be imposed on splints and veneers.
- (3) That an Excise Duty—preferably on a sliding scale—be imposed according to the output of each factory. If this is done it would be necessary for Government to increase accordingly the Import Duty on manufactured Matches, splints and veneers."

Madras Chamber of Commerce.

Letter dated the 15th February 1928.

The Madras Chamber of Commerce has considered your circular letter No. 946-A., dated 5th December 1927, and I am instructed to reply as follows:—

1. Generally speaking this Chamber is strongly opposed to any kind of Government interference with private enterprise in Trade or Industry (save of course the collecting of the necessary revenue) and it finds itself in hearty accord with a resolution just received from the Burma Chamber of Commerce reading:—

"The Chamber is strongly against Government interference in any shape or form until it can be proved that the so-called Swedish monopoly charges extortionate prices for matches to the public."

2. Another principle guiding the Chamber in its deliberations is the question as to whether all the materials for the manufacturing of matches are easily obtainable in India or not. If the bulk of such materials has to be imported it is obvious that India is not naturally equipped for this industry and should not be bolstered up.

3. Though it might be said that paragraph 1 above expresses the Chamber's reply to all the "illustrative views" in your long communication (*vide* paragraph 10 thereof) the Chamber would like, very briefly, to make some observations on sundry paragraphs of your letter.

4. *Paragraph 2.*—There are many other industries besides matches to which such a general dictum could apply, and the point need not be laboured that if the principle of Government interference is accepted in one, it cannot be withheld in others.

5. *Paragraph 3.*—The experience of members of this Chamber is that the Indian made matches of the Swedish Match Company are always higher than in price than other Indian factories.

6. *Paragraph 4.*—To penalize so-called "Foreign capital" would be detrimental to India's interests and retard her progress in the considered opinion of this Chamber.

To impose an excise duty on *some* factories, and not on *all* is merely to raise prices to the consumer, and not to increase Government's revenues, which latter point is really one of the vital issues of this whole question.

7. *Paragraph 5.*—The Chamber thinks you exaggerate "the risk of the country being exploited by a single firm or combination of firms of match manufacturers" and is strongly opposed, as mentioned at the outset, to any system of monopoly, either of manufacture or of sale.

The Chamber would like to call attention to your remark at top of page 4 with reference to a "National Industry" and to point out that until import duty was raised to Rs. 1-8-0 per gross, there were no Indian factories, and no Match industry practically speaking, let alone a "National industry." Moreover, the Chamber questions if it ever can become a "National industry" for the reasons mentioned in paragraph 2 above.

8. *Paragraphs 6, 7, 8.*—Being opposed, on general principles, to Government interference, the Chamber seems no advantage in discussing your many suggestions as to monopoly of manufacture or of sale, manufacture under licence, control of factories, sales corporations, establishment of committees, etc., etc. No such arrangements would in the Chamber's opinion prove satisfactory.

In fact the Chamber believed that most of them may be dismissed in the closing words of paragraph 7 of your circular letter under reply, viz. "This method, however, might be considered cumbrous and unsuited to the requirements of the trade."

9. *Paragraph 9.*—The opinion of the Chamber is specifically requested upon the inevitable disappearance of the smaller factories under any system of monopoly and how far such a result is desirable.

If the Chamber were advocating any system of monopoly, control or licensing (under which small and inefficient plants would inevitably disappear) it would say such an end was desirable, because of the difficulty in controlling a multitude of small and inefficient plants, but as the Chamber is against Government interference in private enterprise, it has to say such a result is not desirable.

Small factories should be left to themselves and to the competition of the trade. Similarly, the minor question of "the very large number of different labels at present in use" is not a problem that should exercise the mind of Government. Nor, in the opinion of this Chamber, should the Tariff Board or Government worry about overproduction and wasteful competition and seek to devise means of securing "a fair profit to the manufacturer."

The Chamber respectfully submits that such points do not come within the province of Government. They should be left to the market law of supply and demand and to the trade concerned.

10. The safeguarding of Government revenues seems almost to have been lost sight of in the suggestions embodied in the long communication under reference.

In fact most of them, as in paragraph 7 could be objected to on the ground that "this would involve the organization of a new department on a somewhat extensive scale and might be objected to on the ground of expense."

11. In conclusion I am to reiterate the view expressed in paragraph 1 above and to impress upon the Tariff Board that this Chamber consider any system of Government monopoly altogether undesirable "both in the interest of the industry and of the country in general."

I am directed to express the Chamber's regret at the delay in dealing with your letter.

Burma Indian Chamber of Commerce, Rangoon.

(1) *Letter dated the 15th February, 1928.*

I am directed by the Committee of this Chamber to reply to your letter No. 946-A., dated the 5th December, 1927, forwarding a copy of the remarks made by Sir Padamji P. Ginwala, President of the Indian Tariff Board, in resuming the enquiry into the Match manufacturing industry in India.

2. My Committee have carefully considered the remarks made by the President together with the proposals contained in your letter. In their representation dated the 30th November, 1926 on the subject, my Committee explained in full how the Match industry fulfilled all the conditions laid down by the Indian Fiscal Commission and claimed that it was fully entitled to be protected. They therefore do not think it necessary to go over the ground again. In order that the necessary protection may be extended to the industry, my Committee suggested that the import duty on matches, splints and veneers should be declared a protective duty and that the present rates of duty should be maintained. My Committee beg to repeat, with all the emphasis at their command, that if the interests of the Indian Match Industry are to be really safeguarded, it is imperative that the import duty on matches, splints and veneers, which is now scheduled as a revenue duty, should be declared a protective duty. Otherwise there would be no guarantee to the match manufacturers in India of the continuance of a particular rate of duty since a revenue duty is liable to be altered according to the revenue exigencies of Government while a protective duty cannot be altered except with the express sanction of the Legislature. My Committee suggested the maintenance of the present rate of import duty, viz., Re. 1-8-0 per gross on matches because they believe that it is sufficient to give the necessary protection to the Indian Match Industry and that the fixing of the duty at a higher figure would be an unnecessary burden on the consumers as the Indian factories would then be theoretically in a position to raise the price by the difference between Re. 1-8-0 and the new higher duty that may be levied unless some safeguards were adopted to prevent such a rise in prices. The questions now referred to my Committee by the Board were not before them at that time. In view, however, of the suggestions made in paragraph 7 below, which have been made after carefully considering the present reference from the Tariff Board, and in view of the fact that the existing match factories in India are in a position to supply all the requirements of the country, my Committee are firmly of opinion that the interests of the Indian industry would be better served if the import duty is raised to a figure, say Re. 4 per gross, so as to render imports practically unremunerative. As the prices are to be regulated by the sales organization, referred to hereafter, on a certain well-defined basis, my Committee do not apprehend that the consumers would be called upon to pay anything more than a fair price and thus the manufacturers will not be in a position to take any undue advantage over the consumers.

3. My Committee beg to reiterate their firm opinion that considerations of revenue should not weigh at all in determining whether a particular industry should be protected or not. They therefore regret to note that the Government of India and at their instance the Tariff Board also, appear to attach undue importance to such considerations in so far as the decision as to the policy to be adopted in regard to the Indian Match industry is concerned. In this connection, it must be remembered that the duty on matches was raised to the present figure at a time, when the finances of the Government of India were totally disorganised owing to causes, which my Committee need not pause to discuss, and when more and more revenue was needed to meet recurring deficits. It may be pointed out that in the year 1920-21, i.e., before the import duty on matches was raised, the revenue from this source amounted to a little over Rs. 16½ lakhs only. After the duty was raised to the present figure, the maximum revenue was Rs. 154 lakhs in 1922-23 which has now gone to Rs. 88 lakhs and Government apprehend that it will still go down as the Indian industry develops more and more. While this is true, my Com-

mittee fail to understand why Government should insist on making a poor-man's necessity a source of substantial revenue. The finances of the Government of India have much improved now and they can therefore well afford to be satisfied with a comparatively smaller revenue from matches. My Committee also beg to submit that with the development of the Match industry Government revenues will be benefited in various other ways. The industry will require match-making materials in larger and larger quantities, most of which will have to be imported and the Government revenue from the import duty on such materials will substantially increase. The industry will also pay income-tax, supertax, forest royalty, railway freight and etc. It will also find more lucrative employment for a large number of people, whose purchasing power will consequently increase, which in its turn will tend to increase Government revenues in various indirect ways. My Committee therefore feel that Government and the Tariff Board would not be justified in attaching importance to considerations of revenue in deciding the policy to be adopted in regard to the Match industry. My Committee therefore beg to urge that Government may be well advised to grant adequate protection to the Match industry irrespective of revenue considerations. At the same time my Committee do not lose sight of the fact that in case their suggestion to impose a prohibitive import duty on matches is adopted, the imports of matches and consequently Government revenue from this source will be substantially reduced. If Government are not prepared to forego this revenue, my Committee beg to suggest that they may obtain a Royalty not exceeding annas 6 per gross from the Central Sales Organisation but such royalty should not be collected unless a prohibitive import duty is levied as suggested above.

5. My Committee have given their careful consideration to the various proposals, contained in your letter to deal with the situation created by the Swedish Trust. The Tariff Board no doubt recognizes that the internal competition of factories, controlled by the Trust, is even more serious than the external competition which the Indian manufacturers have to face. As stated in paragraph 3 of your letter, this Trust has in recent years obtained a dominating interest in the match trade of almost every country and its policy is avowedly aimed at securing a controlling interest in the match trade of the world. In pursuance of this policy, the Trust aims at securing a dominating position in India, partly by eliminating the smaller Indian concerns by means of unfair competition and partly by working arrangements with the larger Indian factories should this appear to be the most feasible course. Having acquired this control the Trust will raise prices in India, thereby exploiting the country for the benefit of foreigners. In view of the avowed objects of the Trust and in view of the results of its activities in various countries, my Committee feel that very effective steps should be taken to prevent the Trust not only from extending but even continuing its present mischievous activities which have proved detrimental to the interests of the indigenous industry. After a very careful consideration of the various proposals, my Committee have come to the conclusion that the system of issuing licences for the manufacture of matches is the most suitable. They believe that under this system free competition between the Indian manufacturers will have a full scope, which will naturally lead to increased efficiency and in course of time the industry will be in a position to hold its own without any protection. They therefore beg to suggest that licences for the manufacture of matches should be issued to the existing factories and the quota of each factory should be fixed according to its production and capacity on the following conditions:—

- (1) No license should be issued to a manufacturing concern, at least 75 per cent. of the capital of which is not held by Indians and at least 75 per cent. of the Directors of which are not Indians. The Directors should be in their own name and capacity and not merely as nominees.
- (2) The quota of the factories controlled by the Swedish Trust should be fixed on the basis of their average production during the last three years and should in no case exceed 25 per cent. of the present total local production. This quota should be annually re-

duced by 20 per cent. eliminating the Trust automatically in five years, unless in the meantime it gets itself registered under the Indian Companies Act and complies with the requirements regarding capital and Directorate mentioned under (1) above.

- (3) Any factory would be at liberty to amalgamate with, or transfer its quota to, another factory except a factory controlled by the Trust if it so desires. This, my Committee believe, will lead to economy in production.

7. As for sales, my Committee beg to suggest that a Central Sales Organization should be formed with its own share capital which should be treated as a public utility concern. The capital of this concern must be expressed in rupees, which should be held exclusively by Indians. The Directorate should also be entirely Indian. It would be desirable to distribute its capital in as many hands as possible. The function of this organization would be to control and regulate sales of matches whether imported or locally manufactured. It will be responsible for fixing the prices at which productions of manufacturers are to be purchased. These prices should be fixed on the basis of the cost price *plus* an appropriate percentage for depreciation and a reasonable margin of profit. It will be necessary to fix the prices separately for each manufacturer and my Committee suggest that prices should be annually revised.

To prevent the Sales Organization from profiteering, it is necessary to lay down that the price at which it may sell matches to the consumers, should be fixed on the basis of expenses of distribution *plus* a certain percentage, say 8 per cent. per annum. The Board of Directors of this organization should consist of—

- 1 Director to be nominated by Government.
- 2 Representatives of match manufacturers.
- 4 Directors elected by the shareholders.
- 2 Representatives of the Federation of Indian Chambers of Commerce.

My Committee further suggest that local Advisory Committees in each Presidency town should be formed to advise the Central Sales Organization regarding the fixing of sales and purchase prices. These committees should consist of one Government nominee, one representative of the manufacturers and one representative of the local Indian Chamber of Commerce.

8. There is one more important question which remains to be considered. The Tariff Board is undoubtedly aware that matches are being manufactured in some of the Native States and any scheme which may be ultimately adopted by Government will not be ordinarily applicable to factories situated in the Native States. My Committee, therefore, beg to suggest that suitable steps should be taken to protect the industry in British India against imports of matches manufactured in the Native States or the latter should be persuaded to accept the scheme which may be adopted in British India, if it is feasible to do so. Otherwise the whole scheme will fail owing to unrestricted imports which may come in from unlicensed factories which may spring up in a large number in the Native States.

(2) Letter No. GL/144/27-28, dated the 29th February 1928.

With reference to my letter No. GL/151/27-28, dated the 15th instant, I am directed to supplement hereby the views expressed in paragraph 7 thereof with regard to the formation of a Central Sales Organization.

2. My Committee have indicated in the letter referred to above the broad lines on which the Sales Organization should be formed and the general nature of the powers and functions to be entrusted to it. They however think it desirable to put their suggestions with regard to the powers and functions of the Organization in a more concrete form in order that the Tariff Board may be in a position to know exactly what my Committee had in view when they made

their suggestions contained in paragraph 7 of my letter dated the 15th instant. The concrete suggestions of my Committee are as follows :—

- (1) The Sales Organization should be given a charter on some such lines as the East India Cotton Association, Bombay, or the one that was proposed to be given to the Stock Exchange in Bombay by the Government of Bombay in pursuance of the recommendation of the Atlay Committee, the idea being that no other Sales Organization or agency could be started in the country for the sale of matches, or in other words, the proposed Sales Organization should have a monopoly of the sale of matches in the country.
- (2) The Sales Organization should be the only authority empowered (a) to issue licenses for the manufacture of matches in the country (b) to fix the quota meaning the quantity to be manufactured by each of such licensed factories (c) to fix the price to be paid to such factories for their matches. My Committee have suggested in their letter of the 15th instant that prices should be fixed on the basis of the cost price *plus* an appropriate percentage for depreciation and a reasonable margin of profit. At the same time they are of opinion that quality must also be taken into consideration in fixing the price. This, my Committee are sure, will induce the manufacturers to improve and maintain the quality of their matches.
- (3) Necessary powers should be vested in the Sales Organization to enforce the conditions laid down under (2) above in case of breach of any of those conditions by any factory.
- (4) In extreme cases particularly for economic territorial purposes, it might be found necessary to authorise the Sales Organization to purchase some of the factories which refuse to or cannot afford to shift to more suitable areas which the Sales Organization might indicate. As an illustration, it might be cited that if there are more factories than are required in one particular area and none or fewer factories in another area, the Sales Organization might ask some of the factories in the former area to shift to the latter area if in their opinion it is found necessary to do so from the economic point of view. If the Sales Organization is unable to persuade one or more factories in the former area to shift to the latter area by offering a larger quota, a higher purchase-price or other reasonable inducements according to the needs of each particular case, the Sales Organization should have the power to buy up such factory or factories.

Northern India Chamber of Commerce, Lahore.

Letter No. 1—33, without date.

I am directed to refer to your No. 946, dated 5th December 1927, and to inform you that this Chamber has given its careful consideration to the various ways indicated by the President of the Tariff Board, as calculated to lead to a solution of the difficulties with which the Tariff Board is confronted in dealing with the case of match protection.

This Chamber is of opinion that the activities of a powerful body acting as a Trust for world monopoly creates a legitimate case for Government intervention.

This Chamber observes that the existence of such a Trust in India has been recognised and that an attempt has been made to find a remedy by preventing it from operating as such. A Trust which endangers fair competitive conditions and is likely to crush an indigenous industry in its infancy must be discouraged. But this Chamber does not consider that the solution lies in creating a Government monopoly of one kind or another.

The objection to a Government monopoly and the handicaps it involves, are too well known and generally accepted to need recapitulation or discussion. The second alternative of a private or public Syndicate with a sale monopoly or an independent sales corporation would be open to two serious objections. The first is that this very Trust is bound to play a prominent part in such a syndicate or corporation frustrating the very object in view. The second objection is that if controlled by Government, it would be open to all the drawbacks of a Government monopoly, while an uncontrolled private or public syndicate or corporation would essentially have a tendency to act as a Trust.

This Chamber therefore considers that the real issue has been lost sight of and that the manner in which the questions have been put up for consideration is likely to cause confusion.

The main point is that of protection and this Chamber believes that the necessity of adequate protection is not denied. This Chamber considers that the development with foreign wood of this industry in which most of the other raw materials are at present imported, cannot be calculated to make the industry indigenous or to benefit the country. This Chamber is therefore of opinion that such of the Match industry in India as is based on the use of foreign wood has no case for protection whatsoever, and does not fulfil the first of the three conditions laid down by the Fiscal Commission as requisites of protection, namely, an abundant supply of wood in the country for such factories.

This Chamber holds that such match factories alone as are entirely dependent on Indian wood have a real claim for protection; and that the prospects of the development of this industry in Burma and Northern India, with the use of local wood, are very considerable. This development must necessarily take some time and an effective tax on imported match wood with a view to discourage its use in any form is consequently essential during such period.

This Chamber is strongly of opinion that if foreign match wood is not discouraged from entering the country, there can be no doubt that the Swedish combine must ultimately succeed not only in crushing the Indian factories using Indian wood but also in wiping out of existence even more rapidly those utilising foreign wood. Consequently any legislation which does not recognise the importance of taxing imported match wood, will fail equally to encourage the development of Indian match wood or to frustrate the designs of a Trust operating in the country.

This Chamber is fully alive to the fact that a heavy tax on imported match wood would cause a sudden drop in Indian manufacture; but this drop will be counterbalanced by the import of finished matches, till such time as Indian wood is able to supply the requirements. Meanwhile the prices in India must be allowed to adjust themselves in the normal way without discriminating between the origin of capital. This Chamber does not consider that a heavy duty on imported match wood can affect its price to any considerable extent since the total requirement of wood for Indian match consumption would be about 3½ million cubic feet per annum and this is a small quantity when compared with the wood supplying capacity of the Government and State forests alone, and if the foreign match manufacturers raise their prices unduly there will be all the greater incentive for the local factories to increase their output with Indian wood.

This Chamber wishes to point out that its recommendations do not debar the Swedish Combine from working in India with Indian wood nor does it consider that such a restriction need be placed. But this Chamber certainly holds the view that the activities of this Combine should be kept under close observance and if while working with Indian wood the Swedish Combine shows a tendency to eliminate competition by an unfair use of its world-wide organisation in pursuing a rate war, Government should check this by the immediate imposition of a special excise on the manufactures of this Combine.

This Chamber is conscious of the fact that there are several match factories which are badly located in respect of the supply of the indigenous wood, while others are extremely well situated in this respect and have a promising future. In its opinion it would, in the interest of India, be a fatal mistake to handicap the promising concerns with a view to helping the badly located factories which must eventually drop out in the economic struggle.

As regards excise on Indian manufactures, while this Chamber recognises that matches afford a convenient means of taxation, it does not approve of the question of Government Revenue being mixed up with that of protection in such a manner as to make the two interdependent. The two interests are not at all identical, and it would be undesirable that instead of fostering this essential industry, its development should be jeopardised by burdening it with serious encumbrances.

The views of the Chamber have been clearly stated above, and excise on local production does not appear to the Chamber to be called for, but it is nevertheless considered necessary to levy excise, the corresponding rise in the import duty must be determined with due regard to the retail sale price of a single box, and in no case should the manufactures from indigenous wood be prevented from affording a larger inducement to the middleman than what would be possible for imported matches or those manufactured from imported wood.

Southern India Chamber of Commerce, Madras.

Letter No. G-123, dated 23rd February 1928.

My Committee have fully considered after consultation with local match manufacturers the points raised in your circular letter No. 946-A, dated 5th December 1927. In this connection I am to request you to refer also to our letter No. G-261, dated 3rd May 1927, on the same subject.

(1) My Committee are definitely of the view that the present revenue duty of Re. 1-8-0 per gross has very materially helped the growth of the indigenous industry and is absolutely required to be maintained at its present level, if not enhanced, as a protective duty, the need for the continuance of which may be reviewed at some future date.

(2) My Committee are of opinion that a system of production or sale or both, by monopoly, regulated or unregulated, is extremely undesirable and on the other hand feel, notwithstanding the difficulties suggested of price war and eventual unrestricted monopoly by the Swedish Trust, which contingency may, of course, be promptly faced when it arises, that a system of discriminating excise duty equivalent to the import duty might successfully be imposed on all foreign concerns engaged in the production of matches or splints or veneers in India. I am to advise that for this purpose a working definition may be suggested that any concern at least 75 per cent. of the capital, of which is owned by British subjects domiciled in India and at least 75 per cent. of the Directors or partners of which are Indians, and in which an adequate number of Indian apprentices are trained every year, may be deemed an Indian concern, due provision of course being made that the classification will be variable in accordance with transfers of shares made from hand to hand. My Committee are of opinion that the alternative suggestion of introducing a licensing system is unworkable and will lead to vexatious interference and restriction at every stage so as to impede the rapid growth that characterises the industry to-day. It is also suggested that the loss of revenue to Government apprehended in pursuing a policy of protection to the industry will be nothing compared to the advantages of establishing the industry firmly in the country.

I am also directed to suggest the following methods of further encouraging the indigenous industry:—

- (1) That railway freight on match wood and splints should be at fire-wood rate uniformly in all railways.

- (2) That the duty on import of heavy chemicals, which though used for other manufactures than matches, are to be considered as raw materials, is to be abolished or maintained at a nominal rate of 2½ per cent. *ad valorem*.
- (3) That the Boards of Industries constituted under the State Aid to Industries Act in the Provinces should be liberal in granting loans to match manufacturing concerns.
- (4) That the Government would be well advised in planting reserve forests with aspen wood, pine wood, and poplar which are considered as suitable for match manufacture.
- (5) That the railway freight on matches should be considerably reduced.

Indian Chamber of Commerce, Tuticorin.

Letter No. 4/173, dated the 10th March 1928.

I am directed by my committee to invite your kind attention to the necessity for protecting Indian match industry and for eliminating foreign imports.

The proposed central sales organisation my committee suggests need not be run by the State but be entrusted to a joint stock company with Indian capital and under Indian management. The regulation of imports production and sales may be left in its hands.

The Punjab Chamber of Commerce, Delhi.

Letter dated 16th March 1928.

We are directed to refer to your letter dated the 5th December 1927, enclosing a copy of the remarks made by Sir Padamji P. Ginwala, President of the Indian Tariff Board, in resuming the enquiry into the Match manufacturing industry in India.

Our Committee have carefully considered the various opinions and points at issue, but were unable to come to any unanimous decision as to the procedure to be followed with regard to the question of protection of the Match manufacturing industry in India.

They, therefore, regret that they are unable to make any definite reply to your letter, but, in the event of any further legislation being introduced or proposed, our Committee would, doubtless, take the matter up, and submit its considered views on such legislation.

Mysore Chamber of Commerce, Bangalore.

Letter No. 1145-M.C.C., dated the 23rd March 1928.

I am directed to acknowledge the receipt of your letter No. 946-A., dated 5th December 1927, inviting the views of this Chamber on the various matters in connection with the Match Manufacturing Industry in India.

In view of the importance of the subject and the variety of issues involved, the Chamber had to take some time to reflect on the points set forth in your letter. The whole question was carefully considered by the Managing Committee at their meeting held on 28th February 1928, when the opinion expressed by the members was in favour of allowing private

enterprise to develop free from all restrictions hampering its growth. But in the case of companies to be started for the manufacture of Matches, the Managing Committee are strongly of opinion that they should be permitted to start work only on condition that adequate representation of Indian capital and Directorate is secured in such concerns, and that they should also freely provide facilities for the training of Indian Apprentices in the industry.

On the important question of the Agency for sale and distribution of matches the Managing Committee are of opinion that this work be entrusted to an independent central sales organization, rather than adopting the system of Government monopoly for sales. Such an organization should be an Indian Company with rupee capital. It will be an important duty of this organization to control the sales of matches imported or manufactured locally and to fix the price to be charged to the consumer, etc.

If the principle is accepted the other details can be worked out without much difficulty.

Messrs. Martin and Company, Calcutta.

A.—WRITTEN.

(1) Letter dated 26th October 1927.

With reference to the enquiry into the Match industry, and the local evidence recently given, we have not been able to see a complete report of this but only the short newspaper report; we have been informed however that some reference has been made to a shortage of suitable indigenous timber for match making purposes.

Should this information be correct we wish to point out that this evidence is not in accordance with facts. We are the representatives of the Government of India for the local sale of Andamans timber and in that capacity we dispose monthly of large quantities of papita logs to the local match making firms. Present deliveries could be increased somewhat under the present shipping arrangements but in the event of much increased demand further shipping facilities would be required when there would probably be no other difficulty. Of course if a very large supply were called for then possibly the question of extra labour in the Andamans forests would arise.

Large quantities of papita are at present being supplied under monthly contract direct to the Rangoon match firms from the Andamans. In addition to this timber there are other species suitable for other uses in the industry as dhup which is useful for match boxes.

We are informed by the Chief Officer, Andamans, that the supply of papita is practically unlimited.

If we can give the Board any other information on this head we shall be glad to do so.

(2) Letter No. G. T.-362, dated the 12th March 1928.

With reference to your request to our representative that enquiries should be made as to the probable cost of shipping 2,000 tons per month of match logs to Calcutta from the Andamans, we addressed Messrs. Mackinnon Mackenzie and Company who in reply referred us to Messrs. Turner, Morrison and Company, Limited, the Managing Agents of the Asiatic Steamship Company who maintain the present service.

We had also addressed this firm who replied that they had no small steamer available but that they could offer a large steamer if a guarantee of a full cargo could be given, which would amount to 5,000 tons, in which case 4 or 5 trips per annum could be made to give the required total; the freight quoted is Rs. 20.

Messrs. James Finlay for the Clan Line have referred the matter to the owners in London.

The shipments suggested by Messrs. Turner Morrison are not very satisfactory as the logs would deteriorate through storage and also a large storage space would be necessary which would add to the cost while the freight quoted of Rs. 20 compares with the present rate of Rs. 12-8.

Regarding present prices of logs and your suggestion that they could be sold at Rs. 40 we circularised the local match making firms and offered them fresh logs at this price, less Rs. 5 for a minimum of 100 tons but the Western India Company were the only firm who replied and they took 100 tons at this price.



MESSRS. MARTIN AND COMPANY.

B.—ORAL.

**Evidence of Mr. F. A. HUTCHINSON recorded at Calcutta
on Tuesday, the 14th February, 1928.***Sale of Government timber.**President.*—You are employed by Messrs. Martin & Co.*Mr. Hutchinson.*—Yes.*President.*—That Company has a contract with the Government of India for the sale of Government timber from the Andamans.*Mr. Hutchinson.*—Yes.*Mr. Mathias.*—Is this timber sold by Messrs. Martin & Co. or by a subsidiary company of which Messrs. Martin & Co. are the managing agents?*Mr. Hutchinson.*—Messrs. Martin & Co. are the firm. There is no subsidiary company.*President.*—Under the terms of that contract, I understand that you are to take all the Government timber from the Andamans.*Mr. Hutchinson.*—Yes, to sell locally.*President.*—Who arranges for the freight?*Mr. Hutchinson.*—Messrs. Turner, Morrison & Co.*President.*—Have you to make arrangements on your own?*Mr. Hutchinson.*—It is done between Government and Messrs. Turner, Morrison & Co. who are the agents of the Asiatic Steam Navigation Company. We have nothing to do with that.*President.*—Do you get a c. i. f. price from Government or how do you purchase?*Mr. Hutchinson.*—We do not purchase, if we get an enquiry for instance for any kind of timber we wire to the Chief Forest Officer at Port Blair and see if he could supply and if so what the c. i. f. price would be.*President.*—When it arrives here, you take delivery of it?*Mr. Hutchinson.*—We do it or we arrange with the buyer to take it up.*President.*—Do you merely take orders or do you also carry stocks?*Mr. Hutchinson.*—We carry stocks say up to 1,000 tons of logs and squares, but that is not all match timber.*President.*—You warehouse the logs, etc., do you?*Mr. Hutchinson.*—Yes, at Shalimar.*Mr. Mathias.*—Do you charge Government any commission?*Mr. Hutchinson.*—Yes, we do.*President.*—You get a commission and at the same time you get a price. When you get a commission, ordinarily you are not concerned with the price and when you fix your own price, you do not get a commission. That is the ordinary practice.*Mr. Hutchinson.*—Speaking generally. Unless it is a direct sale for delivery ex-ship, we know what the price is.*President.*—Supposing you get a direct order, you send that to the Chief Forest Officer and ask him to supply the timber. He quotes you a c.i.f. price. To that, you add your commission?*Mr. Hutchinson.*—No.*President.*—You take your commission from Government.*Mr. Hutchinson.*—Yes.

President.—And you make a profit between the c.i.f. price quoted to you by the Chief Forest Officer and the price at which you sell to your customer.

Mr. Hutchinson.—Do you mean we might make a profit?

President.—Yes.

Mr. Hutchinson.—No. If we get more it is so much better for Government and indirectly so much better for us because we will get more in the shape of commission.

Dr. Matthai.—When you sell it in Calcutta, what do you add to the c.i.f. price?

Mr. Hutchinson.—Just the cost of landing, unless the buyer takes delivery from the ship.

Mr. Mathias.—What commission do you get?

Mr. Hutchinson.—It is based on a sliding scale. For a turnover not exceeding Rs. 40,000, we get 5 per cent., for an excess up to Rs. 50,000, 4 per cent., up to Rs. 75,000, 3 per cent., over Rs. 75,000, 2½ per cent.

President.—When you carry stocks, you do so at Government risk.

Mr. Hutchinson.—Yes.

President.—You are not doing business in the ordinary way. It is purely on a commission basis; is it not?

Mr. Hutchinson.—Purely as agents for Government.

President.—I misunderstood the position. You have received certain consignments of papita?

Mr. Hutchinson.—Yes.

President.—During last year?

Mr. Hutchinson.—Yes.

President.—How many thousand tons did you get?

Mr. Hutchinson.—Approximately 2,000 tons.

President.—What time of the year was it?

Mr. Hutchinson.—All the year from January to December.

President.—Were you able to dispose of as it came or did you have to stock it?

Mr. Hutchinson.—It was all disposed of up to about August. Then, we began to accumulate stocks; for some reason or other sales declined and in fact stopped altogether.

Price of wood.

President.—What was the price which you were realising in August?

Mr. Hutchinson.—Rs. 50 to Rs. 55.

President.—What wood was that?

Mr. Hutchinson.—Papita.

Mr. Mathias.—Did you ask as much as Rs. 60?

Mr. Hutchinson.—No.

Mr. Mathias.—Some of the factories told us that you asked Rs. 60.

Mr. Hutchinson.—I know a firm that bought it at Rs. 60 from another firm to whom we had sold it.

Dr. Matthai.—Did you sell Bakota?

Mr. Hutchinson.—Yes. We do sell when we get any.

Dr. Matthai.—At what price?

Mr. Hutchinson.—At Rs. 60 per ton.

Mr. Mathias.—Do you sell Dhup?

Mr. Hutchinson.—Not much.

President.—You think that Rs. 50 to Rs. 55 is the price that Government ought to get.

Mr. Hutchinson.—That I cannot say. The Chief Forest Officer knows the cost of extracting it.

President.—The Chief Forest Officer has given us his c.i.f. price as Rs. 37-8-0.

Mr. Hutchinson.—He told us that his price was Rs. 30 plus Rs. 12-8-0 for freight.

President.—You got Rs. 55 a ton for Government.

Mr. Hutchinson.—Yes, for a part of the consignment.

President.—What stocks have you got now?

Mr. Hutchinson.—About 500 tons.

President.—Is that now saleable? I understand that it deteriorated so much that you cannot sell it.

Mr. Hutchinson.—I don't suppose that some of it is of much use any more for matches. But I have just offered about 200 tons at Rs. 40 a ton to get rid of the stock, to be sawn for planks.

President.—You might have sold all your wood if you had reduced your price.

Mr. Hutchinson.—I would just now sell the whole lot at Rs. 45 a ton if I could do so.

Mr. Mathias.—How long has it been in stock?

Mr. Hutchinson.—Since January. Of this, 250 tons is perfectly good.

Mr. Mathias.—We have been told that some of the papita has dried and is not very satisfactory.

Mr. Hutchinson.—Whenever a complaint has been made, I have always gone to the factory and made some allowance. I have done so on several occasions.

Mr. Mathias.—It may happen that no allowance will compensate for the use of a very dry wood.

Mr. Hutchinson.—They go to the depôt and select the wood themselves.

Mr. Mathias.—Would it not be more paying if you got rid of your supplies as they came by charging Rs. 40 a ton all the year round? Taking a long view you may eventually have to compete on the basis of the price of aspen in Sweden, if the match industry is to establish itself.

Mr. Hutchinson.—The Chief Forest Officer wants to get as much as he can. If his cost is Rs. 42-8-0, it does not leave much margin.

Mr. Mathias.—These are the figures he gave us yesterday:—

	Rs.	A.	P.
Cost of extraction	14	8	0
Royalty	6	0	0
Freight	12	8	0
Commission	1	8	0

So that, if you get Rs. 40 a ton, it would be a profitable business for Government and you would be able to get rid of your stock immediately.

Mr. Hutchinson.—As soon as a consignment arrives, if a man comes along and offers me a lower rate, say, Rs. 35 or Rs. 40 a ton, I am not anxious to accept the offer at the moment because I may find somebody who will pay me a little more.

President.—So far as match manufacture is concerned, this wood does not improve by keeping.

Mr. Hutchinson.—Certainly not. I agree with you there.

President.—The position is this. Of course if you find other uses for that wood, it is a different matter.

Mr. Hutchinson.—There are other uses for that timber.

President.—If there are, then that wood would not be considered very economical for match manufacture. If higher prices could be obtained for the same class of wood from other people, then from the point of view of match manufacturers this wood is no good for them.

Mr. Hutchinson.—I admit that there is probably a bigger outlet for that particular timber in match making.

Mr. Mathias.—Would it not be better to sell that wood, as it comes, at Rs. 40 a ton?

Mr. Hutchinson.—I should be extremely pleased to, if the Chief Forest Officer had no objection.

President.—Does Government give you any order as to the price?

Mr. Hutchinson.—Except as I say the Chief Forest Officer usually quotes a price which is the minimum and he expects us to get a little more if we can.

Mr. Mathias.—It is within the province of the Commission Agents to urge that it is necessary for Government to reduce the price.

Mr. Hutchinson.—We have written to the Forest Department in the Andamans on several occasions.

Mr. Mathias.—We have pointed out the matter to Mr. Bonnington. I daresay that if you write to him again, you will receive a sympathetic response.

Mr. Hutchinson.—Yes.

President.—Your interest comes into conflict with that of the match manufacturers.

Mr. Hutchinson.—Yes.

President.—The higher the price you get, the better for you, because you get more profits.

Mr. Hutchinson.—That is the whole point.

President.—It is not for us to say anything, but it does seem to me that if Government want to encourage the match manufacture in this country, it is not a good policy.

Mr. Hutchinson.—If that is the intention of Government and if they want us to sell at Rs. 40 a ton, we will do so.

Mr. Mathias.—It is advantageous from your point of view because you will be able to get rid of your supplies as they arrive.

Mr. Hutchinson.—Yes, not only from our point of view but from every point of view it is better to get rid of it quickly.

Mr. Mathias.—It means less return per ton but more outturn.

Mr. Hutchinson.—We carry a fair amount of stock of much more valuable timber such as padauk, the price of which is Rs. 140 a ton. A large amount of our space is now taken up by papita. For storing one ton of wood, we require about 50 square feet approximately. The space is valuable and so it is to our interest to see papita sold as soon as possible.

President.—Do you charge Government for warehousing?

Mr. Hutchinson.—Government pay all the cost.

President.—How does it work out?

Mr. Hutchinson.—We have 117 cottahs, costing approximately about Rs. 2 per cottah. We pay municipal taxes of about Rs. 375 quarterly, or a little over Rs. 100 a month. We have also a high land area of 177 cottahs costing us Rs. 6 per cottah for storing scantlings.

President.—Supposing you had to stock 100 tons for one month how much would you charge Government?

Mr. Hutchinson.—We should not charge them anything. They have got their own land.

President.—Is it Government land?

Mr. Hutchinson.—Yes, or rather rented by Government.

President.—Do they pay municipal taxes?

Mr. Hutchinson.—Yes.

President.—What would the charges above land come to per hundred tons?

Mr. Hutchinson.—Fixed rent including high land is Rs. 1,100 and taxes come to a little over Rs. 100—about Rs. 1,300 in all.

President.—For 100 tons?

Mr. Hutchinson.—For any quantity up to available space.

President.—I really want to understand how much it costs Government to stock 100 tons of this class of wood for one month because I want to understand whether you really have got a better price by selling at Rs. 45 per ton than you would have got Government by selling it at Rs. 40 in August.

Mr. Hutchinson.—How am I to tell you?

Mr. Mathias.—Your fixed charges come to Rs. 1,300.

Mr. Hutchinson.—Yes.

Mr. Mathias.—What is the capacity of the storage? How much can you stock at one time?

Mr. Hutchinson.—500 tons.

Mr. Mathias.—It comes to Rs. 2·6 per year per ton, or 2 or 3 annas a month.

Mr. Hutchinson.—Yes.

Mr. Mathias.—Do you take any particular precautions when you store your wood to keep the sap in the wood?

Mr. Hutchinson.—The majority of the wood is stored in water subject to the rise and fall of the tide at the time.

President.—Do you get regular enquiries from match manufacturers?

Mr. Hutchinson.—Not recently: not since August.

President.—The reason seems to be this. At present the price of genwa which they use varies from Rs. 30 to Rs. 40 and they seem to get pretty regular supplies. The price goes up a little in the monsoon. Whereas your rates are higher and at the same time your supplies are not as regular. Therefore it stands to reason that they should fight shy of you.

Mr. Hutchinson.—Our supplies can be regular. We keep the Chief Forest Officer informed as to how the supplies are going. In this particular instance, our supplies are based on our sales. If sales fall off, as they have fallen off recently, we don't order more.

President.—Sales have fallen off because your price is higher and your supplies are small for their requirements.

Mr. Hutchinson.—I don't think so. We have sold to lots of people at Rs. 45 per ton.

Mr. Mathias.—Now that they don't go to you for this wood, it shows that the price is too high.

Mr. Hutchinson.—If they came along and said that the price was too high, I should immediately write to the Chief Forest Officer.

President.—There was some correspondence between you and some of the match factories, wasn't there?

Mr. Hutchinson.—That is quite correct.

Mr. Mathias.—They produced your letter. When they went to you, you refused to sell it at less than Rs. 55; that was what they told us.

Mr. Hutchinson.—Possibly we did, in view of the Chief Forest Officer's request that we should try and get more for it. Also considering that at one time there was a shortage of other suitable species, but I have offered it to lots of people at Rs. 40, not the fresh wood but the accumulation of the

last couple of months because, as I pointed out, it was interfering with our stocks of more valuable timber.

President.—If you had offered it at Rs. 40 a ton when it arrived you would probably find them ready to buy them all if you keep it for two or three months in the hope of getting Rs. 5 more and the quality deteriorates naturally they would not offer you Rs. 40.

Mr. Hutchinson.—I am prepared to sell it at Rs. 40 as soon as it is landed.

President.—There are three things which are of importance from their point of view, firstly the supply should be regular.

Mr. Hutchinson.—It can be.

President.—Secondly, the wood should be fairly fresh.

Mr. Hutchinson.—Yes.

President.—And the third point is that the price should compare favourably with classes of wood, such as genwa. If you are doing business you have to accept these three principles. If you don't, then of course there will be no sale.

Mr. Hutchinson.—I quite follow.

President.—You think it might be possible, supposing you get regular supplies from the Andamans, to sell it at about Rs. 40 a ton?

Mr. Hutchinson.—If the Andaman Forest Officer says yes, then it is possible.

President.—You have got the same c.i.f. price as before?

Mr. Hutchinson.—Yes. We can sell it at Rs. 40.

President.—Do Messrs. Martin & Co. do any chartering business?

Mr. Hutchinson.—No.

President.—The point arises in this way. Supposing we found that there were 30,000 or 40,000 tons of suitable match wood in the Andamans and that there was a demand for that timber here, would you be able to make shipping arrangements?

Mr. Hutchinson.—That I am afraid I cannot say.

President.—For say 2,000 to 3,000 tons a month regularly?

Mr. Hutchinson.—That I cannot tell you. If we did it we should have to enquire from the shipping companies as to whether they could take up the business. As a rule in regard to the Andamans timber the shipping is not arranged by us at all.

President.—I am asking you.

Mr. Hutchinson.—I do not know if we could interfere.

President.—You are Government agents. At present the Government shipping capacity is limited by the one ship that it runs. Supposing Government said "here are 30,000 tons of this class of wood which we want to dispose of and for which there is a market in Calcutta, will you be able to make arrangements"?

Mr. Hutchinson.—Naturally we would try.

President.—Have you ever considered the question as to what the freight would be?

Mr. Hutchinson.—We never had any reason to.

President.—You had a letter from the Chief Forest Officer, Andamans, in which he said that there was this enormous quantity of wood. As a business proposition would you not look into it and see whether Messrs. Martin & Co. could make some money out of it?

Mr. Hutchinson.—No. The Chief Forest Officer has only got a limited amount of labour. Much more research will be necessary before we do anything of the kind you propose. If he wrote and said "will you enquire and

say what shipping arrangements could be made" then of course we would see to it.

President.—Will Messrs. Martin & Co. be prepared to consider now and let us have their views?

Mr. Hutchinson.—Yes.

President.—Supposing you were to make an arrangement for the supply of 2,000 tons of fresh wood a month regularly, and if, say, Government supplied you at Rs. 22 per ton f.o.b. at what price would you sell it ex-ship?

Mr. Hutchinson.—Add the cost of freight and other usual charges to the f.o.b. price, that is all.

President.—If you take the price of genwa as between Rs. 30 and Rs. 40 per ton, you will have to bring your price down to the neighbourhood of that price?

Mr. Hutchinson.—It will be.

President.—It is for you to work out a scheme and we should be prepared to consider it and say this is the price at which you can sell c.i.f. Calcutta and you would buy it f.o.b. from Government.

Mr. Hutchinson.—I don't think we can do that. The firm may not be prepared to buy from Government.

Mr. Mathias.—Could you ascertain what the freight would be on 2,000 tons a month.

President.—We also want to know whether the freight would be available and if so at what price.

Mr. Hutchinson.—I much doubt whether any steamship company will take it for the simple reason that the steamer will have to go there empty.

President.—It is a very short voyage.

Mr. Hutchinson.—We will certainly enquire.

President.—I don't know what the arrangements of Government are with regard to their own ships.

Mr. Hutchinson.—There are two steamers, the Maharaja and the Ahmedi. The latter is a very small steamer.

President.—What capacity has the Maharaja got?

Mr. Hutchinson.—She carries about 800 tons. She could carry probably 500 tons of papita if required.

President.—She comes here once a month?

Mr. Hutchinson.—Yes; she carries the mail.

President.—She cannot bring more than 5,000 to 6,000 tons a year because she has to carry other classes of wood.

Mr. Hutchinson.—Yes.

President.—Is there much demand for the hard woods here?

Mr. Hutchinson.—Last year we sold about 11,000 tons.

President.—How was that brought from Port Blair?

Mr. Hutchinson.—By these two steamers.

Mr. Mathias.—Do you make allowance for the bark?

Mr. Hutchinson.—Yes.

Mr. Mathias.—Do you know whether that is a universal practice in India?

Mr. Hutchinson.—Yes, according to the thickness of the bark.

Mr. Mathias.—You do not know of any other provincial forest department doing that, do you?

Mr. Hutchinson.—No. In the case of papita which has a thick bark we have to exclude that.

President.—Have you been to the Andamans?

Mr. Hutchison.—No.

President.—When the wood arrives here do you find it in a fairly fresh condition?

Mr. Hutchinson.—Yes. It is quite good when it gets here.

President.—Do the steamers run in the monsoon?

Mr. Hutchinson.—Yes.

President.—Is there any interruption?

Mr. Hutchinson.—No.

Dr. Matthai.—One difficulty that the match manufacturer's experience is that the papita logs are too big in size.

Mr. Hutchinson.—No. I have been very particular in asking them what size they want, and getting that particular size.

Dr. Matthai.—What is the size they require?

Mr. Hutchinson.—About 60 inches in circumference.

Dr. Matthai.—The logs that you get are about 5' in girth?

Mr. Hutchinson.—Yes and the length is 8 to 10 feet.

President.—The papita has a very uneven girth, has it not?

Mr. Hutchinson.—I won't say that. There are some logs of big size which are eccentric.

President.—On the whole you find them fairly round?

Mr. Hutchinson.—They are. There are certain logs which are oval but the proportion is not big.

Dr. Matthai.—You don't deal in genwa at all, do you?

Mr. Hutchinson.—No.

Dr. Matthai.—This is rather a recent departure of Messrs. Martin & Co., this selling of Government timber?

Mr. Hutchinson.—No. They have been agents for the last ten years.

Dr. Matthai.—This match wood was not imported formerly?

Mr. Hutchinson.—It began last January.

Auction of Government timber.

Dr. Matthai.—You don't have a system of auction of Government timber?

Mr. Hutchinson.—There was one, I think, several years ago. They had land at Garden Reach and the Port Commissioners wanted the land so an auction was held so that the timber might be disposed of quickly.

President.—In Burma they have the auction system so that the timber does not remain there for long. I suppose you don't have sufficient quantities to attract a large number of people.

Mr. Hutchinson.—That is so. We have say about 2,500 tons in logs and scantlings at a time.

President.—Have you ever tried to put yourselves into communication with the various match manufacturers and say "here is so much wood in the Andamans. Would you buy your regular requirements from us?"

Mr. Hutchinson.—Not from that particular point of view for the simple reason that the Chief Forest Officer has always impressed on us that he could not supply to us more than 2,000 tons a month.

President.—Did you try to find out what the demand was?

Mr. Hutchinson.—No.

President.—The first thing is to find out what your market is.

Mr. Hutchinson.—We are bound down by the deliveries.

President.—Here are two things. You have got the Andaman officer's statement that the supply is practically unlimited. Then there is the question of market. You have got to find out what the market can absorb and then see whether you can get the wood out from the Andamans. Apparently you have not taken any steps to ascertain what the position is.

Mr. Hutchinson.—We have only taken steps to sell what the forest officer said he could send. Although he says that the supply is practically unlimited, if he is unable to send us the supply what could we do? He says he cannot send more than 2,000 tons a month.

President.—He says the supply is practically unlimited. You want to do business on a commission basis, is it not for you to say “send me whatever you can, and I will see what I can do to sell more wood.”

Mr. Hutchinson.—The question of shipment comes in then. If he had asked us “look here, I am anxious to sell larger quantities, could you find a market?” Then we might have done it.

President.—I should have thought that the commission agent would look at it the other way about and say “I have got a market, can you supply me.” If he says he can, then it is for you to make arrangements to fetch the stuff.

Mr. Hutchinson.—We did not know we had the market.

President.—Don't you think it is for you to find the market if you want to do business on commission? The market is certainly there to a certain extent but it has not been tapped yet.

Mr. Hutchinson.—That would be the normal course of Commission Agents but in this case it is no use our attempting to find buyers and then possibly the Chief Forest Officer informing us that he cannot supply it.



Messrs. Steel Brothers and Co., Limited, Rangoon.**A.—WRITTEN.***Letter dated the 24th March 1927.*

At the request of the President, I have the honour to undernote for the Board's information rates quoted by the B. I. S. N. Co. for freight on round timber from Burma to the main Indian Ports, viz. —

	Rs.	A.	P.	
Calcutta	27	0	0	} All per ton of 50 c.ft.
Madras	34	4	0	
Bombay	45	0	0	

It will also, no doubt, be of interest that above rates are double what is charged for converted timber.



STEEL BROTHERS & COMPANY, LIMITED.

B.—ORAL.

**Evidence of Mr. J. B. GLASS, recorded at Rangoon on Thursday,
the 24th March 1927.**

The Extraction of timber.

President.—We are very much indebted to you for coming to give evidence. I am sorry I was unable to give you any definite idea as to the points on which you would be examined. The questions will be of a general nature because you are not directly interested in the Match Industry. The firm of Steel Brothers is very largely interested in the extraction of timber?

Mr. Glass. Yes.

President.—You have many years' experience in the line, haven't you?

Mr. Glass.—20 years.

President.—Where are your principal forests in which you work most?

Mr. Glass.—They are distributed over Burma.

President.—In Lower Burma, have you any forests?

Mr. Glass.—Yes, in Prome and Pyinmana and a small Hardwood forest between Pyinmana and Toungoo.

President.—I suppose you are interested chiefly in Hardwoods?

Mr. Glass.—Yes.

President.—Do you extract any soft wood?

Mr. Glass.—Practically none at all on a commercial basis.

President.—How does your concession ordinarily run? Do you take a concession for the extraction of particular species or do you extract all kinds of wood in that area?

Mr. Glass.—The concession is for the extraction of about 15 species.

President.—Are they named in the concession?

Mr. Glass.—Yes.

President.—The point I am not clear about is this. One provincial Government has stated, anyhow, that if soft wood were extracted at the same time as hardwood, it may be more convenient for the manufacture of matches.

Mr. Glass.—The trouble is that we are unable to get a price which will cover our extraction costs for softwoods. In our Hardwood Forest we are working about 20 miles from the Burma Railways. We have to bring the timber in by light railway. Our costs are heavy.

President.—There is another difficulty about this match wood that it should be fresh.

Mr. Glass.—Yes, that is one of the difficulties. It takes us six to nine months to get our timber into the Mills. By that time softwood for the Match Industry would have considerably deteriorated.

President.—You would get your wood by floating down the river?

Mr. Glass.—We don't. We bring it by rail.

President.—Everything by rail?

Mr. Glass.—Yes.

President.—Is that your own railway?

Mr. Glass.—Yes. The conditions under which we work are such that the wood is sure to deteriorate before it reaches the factory. The soft woods, if we cut logs and keep converted timber for some time, become mouldy.

Dr. Matthai.—Within what time should it be used?

Mr. Glass.—Within three months from the time of felling.

President.—Then, it would not be a practical proposition.

Mr. Glass.—No.

President.—The same difficulty will be experienced as regards Government forests worked by the agency of the Forest Department.

Mr. Glass.—Yes.

President.—We have got to fall back on special soft wood forests or depend on small contractors.

Mr. Glass.—Yes, on the areas close to the railway line. It costs us Rs. 10 to Rs. 15 more to get timber out owing to distance than it does small contractors working railside forests.

President.—Do you do your extraction departmentally or do you do it through contractors?

Mr. Glass.—We have our contractors.

President.—Are they buffalo contractors?

Mr. Glass.—We have ten of our own elephants and the rest are buffalo contractors.

President.—Who does the cutting?

Mr. Glass.—We have felling contracts as well as dragging contracts. The timber is brought to our railway line and from there it is railed to the Mills.

President.—Do you find any rise in the cost of extraction during the last few years?

Mr. Glass.—Immediately after the war there was a rise; but it is fairly stabilised now.

President.—Do you find reasonable supply of labour for extraction?

Mr. Glass.—Labour is rather short. Men work for us during the off season and we find difficulty during the paddy planting and reaping seasons.

President.—Is it largely Burman labour?

Mr. Glass.—Almost entirely.

Dr. Matthai.—The extraction goes right through the area.

Mr. Glass.—It does in our forests.

President.—In your forests where you don't bring the logs by rail, do you do extraction all the year round?

Mr. Glass.—There is no extraction in the hot weather.

President.—No extraction goes on?

Mr. Glass.—In the hot weather, the elephants rest.

President.—I take it that in the forests on the Toungoo and Pyinmana side there are no creeks.

Mr. Glass.—There are some.

President.—Can you float the logs?

Mr. Glass.—Yes, in certain districts.

President.—Does it pay you to rail them?

Mr. Glass.—The streams are so small that the Hardwoods if launched singly could not be floated out.

President.—So that you will always have to raft them?

Mr. Glass.—If we brought soft woods we could float them; otherwise not.

Mr. Mathias.—Have you any experience of planting?

Mr. Glass.—No.

Mr. Mathias.—It has done on a small scale recently by Government

Mr. Glass.—That is so.

Mr. Mathias.—You will simply depend on regeneration in the case of your forests.

Mr. Glass.—We merely cut down the trees marked by Government. They mark in a cycle.

Mr. Mathias.—When you have completed cutting in one forest, you go to another.

Mr. Glass.—We work in a cycle and in the case of a fifteen year lease we take 15 years to cover the whole field.

Mr. Mathias.—You have a 15 year license.

Mr. Glass.—Yes.

Mr. Mathias.—The area that is leased to you is divided into 15 coupes, is that so?

Mr. Glass.—Yes; we work over all our leased area in 15 years.

Mr. Mathias.—You work one coupe a year, the idea being that at the end of 15 years the area will be ready for you to start again.

Mr. Glass.—Yes.

President.—15 years in the case of hardwoods would be a short period, would it not?

Mr. Glass.—It is a short period.

Mr. Mathias.—Your recent leases extend to 30 years, but the cycle is 30 years.

Mr. Glass.—No, but the cycle I believe is now 30 years. Our recent leases are some for 15, some for 10 years. There has been some reduction in the number of trees marked for extraction by Government.

Dr. Matthai.—Do they have a provision of a minimum girth of trees to be felled?

Mr. Glass.—Yes. We are felling Hardwoods down to 4' 6" breast high.

Dr. Matthai.—Don't they mark all the trees which you cut?

Mr. Glass.—In most areas they do.

Rate of growth of soft wood trees.

President.—In these forests I take it there will be a considerable percentage of soft woods along with the hardwoods?

Mr. Glass.—Yes.

President.—I suppose you have your own forest experts to advise you?

Mr. Glass.—I have.

President.—What I want to know is whether your firm or any other firm collect any data about the history of these various trees, that is how long they take to grow and things like that?

Mr. Glass.—No, we don't.

President.—There is a suggestion that Government should come forward for planting trees, but nobody seems to know with any certainty as to how long a particular tree takes to grow.

Mr. Glass.—Some of them may take up to 180 years to grow to maturity, it is very difficulty for me to say, but the softer woods grow much faster. *Mr. Robertson* should be able to give you more information on the point.

President.—I think he gives 15 years as the period for the Bonmeza. Have you found Bonmeza in your forest?

Mr. Glass.—Not very much.

Mr. Mathias.—Is it used for any other purposes than matches?

Mr. Glass.—It is used to a small extent for packing cases.

Dr. Matthai.—Are any of these soft woods used for house building at all?

Mr. Glass.—To a very small extent.

President.—We were told by one of the forest officers that in these forests round about Pyinmana there are quite a number of species of soft wood.

Mr. Glass.—That is so. I will give you a list of those which are commonly found in our forest.—

Letpan (*Bombax Malabaricum*).

Gwe (*Spondias Mangifera*).

Indu (*Bombax insigne*).

Boumeza (*Albizia stipulata*).

Thitpok (*Tetrameles nudiflora*).

Thitpyauk (*Sapium insigne*).

Leza (*Lagerstroemia tomentosa*).

President.—There are six varieties in your forest which are suitable for matches?

Mr. Glass.—Yes, at least.

President.—I suppose these trees are scattered more or less?

Mr. Glass.—Very scattered.

President.—Supposing plantation was undertaken and, say, six or seven species which actually grow in the forest scattered were selected, do you think there will be any difficulty in their growing in clusters?

Mr. Glass.—I don't think there should be much difficulty.

President.—The point I am trying to drive at is that it has been suggested that trees may grow in one part of the forest but may not grow in another.

Mr. Glass.—That is quite true; some trees prefer low land and some prefer high land.

President.—In the same forest area you find trees growing here and there all over the place and there does not seem to be any reason for its not growing in other places?

Mr. Glass.—Some of the forest areas are hilly and some are lowlying. Some trees prefer high land while others prefer low land and the soil varies.

President.—If they select six or seven species which have actually grown in a particular forest you don't think there will be any insuperable difficulty in plantation?

Mr. Glass.—I don't think so, from what I have heard of Government experiments, but concentration may lead to an increase of tree attacking pests.

President.—I take it that these trees, sawbya, gwe and so on, are ordinarily not used for building purposes?

Mr. Glass.—No, they are soft. They are not durable.

President.—The forest people treat them more as weeds?

Mr. Glass.—Yes.

President.—Even for fuel they would not be considered as good enough wood because they won't give you much heat, isn't that so?

Mr. Glass.—They might give heat but I don't think our trees could be cut for firewood at a marketable cost and other woods would probably give better calorific results.

President.—In the forest, I understand, they reserve certain quantities of wood for fuel purposes for the neighbouring population. These trees, I take it, would not ordinarily form part of the wood, would it?

Mr. Glass.—I think such trees are too big to be turned into fuel. I think that there is a rule that only trees which are regarded as unmarketable are cut down for fuel. The forest department, I think, specify certain fuel areas and say that certain trees can be used as fuel.

President.—Do they enumerate the trees?

Mr. Glass.—No, not in fuel reserves, so far as I know.

Dr. Matthai.—A fuel reserve is generally outside the reserve forest?

Mr. Glass.—Yes. They consist usually of scrub jungle. I don't think firewood is cut for any valuable trees.

Mr. Mathias.—Have they any system of passes for the extraction of fuel? If a villager wants to extract so much fuel wood he will get a pass for that, that is he will get so much free of royalty, is there any arrangement like that?

Mr. Glass.—I think so. I think agriculturists in the district obtain firewood free.

President.—In these areas what would be the average charge for extraction and taking it to the railhead or river head whatever it may be?

Mr. Glass.—I should think that the native contractors could extract logs from railside areas at Rs. 15 a ton, felling, dragging, floating or carting to the railway, everything except royalty included.

President.—What is the railway freight?

Mr. Glass.—Somewhere about Rs. 10 Pynmana to Rangoon.

President.—That makes Rs. 25.

Mr. Glass.—Then there is the royalty; loading on trucks Rs. 2 I should take it that small contractors in accessible areas paying a royalty of Rs. 5 should be able to get the timber to Rangoon within Rs. 35 to Rs. 40 including a reasonable profit.

Cost of plantations.

President.—An estimate has been given by Mr. Robertson* for planting. In your case, of course, for the more expensive classes of wood, Government will take as much as it reasonably can having regard to commercial conditions, but when Government undertakes plantation for a particular industry, then this is what happens. Mr. Robertson has taken—

	Rs.	A.	P.
Planting charge per acre for seven years	20	0	0
Supervision charge per acre „ „	16	0	0
Compound interest for 15 years	10	0	0
	<u>46</u>	<u>0</u>	<u>0</u>

Then having got that he wants royalty of Rs. 8-8-0 of which Rs. 2-8-0 is said to be the cost and Rs. 6 is royalty, and he assumes that the yield per acre would be 20 tons of timber, so that Government will get on an investment of Rs. 46, Rs. 120. On 20 tons Government will get Rs. 2-8-0 for actual cost, in addition to that it claims a royalty of Rs. 6. That means Rs. 120 on one acre and that would go on for 15 years. Do you consider that a fair return or do you consider it excessive?

Mr. Glass.—I would not consider it excessive. When does he say you can cut the trees?

President.—In about 13 to 15 years Bonmeza will reach 5 ft. girth. How would you calculate this if you were planting? Suppose you own an acre of land from which at the end of 15 years you get Rs. 120; it would be considered a good investment if it is a paddy land, would it not? If you succeed it would be a regular business. Rs. 120 for 15 years, that means an average income of 8 per cent. after having paid all your costs. That I think would be a fair return for any capital?

Mr. Glass.—Yes, with security of tenure.

The making of splints in a separate factory situated in the forest.

President.—It has been suggested that it may be convenient to make the splints in the forest area and then send them down to different parts of the country.

* Mr. Robertson does not recollect having made this estimate.

Mr. Glass.—That seems to me to be a good idea.

President.—As regards that you have got to consider two things, first, whether you can keep the splints in sufficiently good condition before they are dipped; they may dry up or may get bent. Of course, as regards foreign splints there is evidence that they get the splints out and dip them here. But so far as Indian wood is concerned nobody knows as to how long it would keep because nobody has made any experiment yet. The other thing is would there be sufficient labour available for this kind of work for a big factory in the forest areas?

Mr. Glass.—Probably labour would have to be imported.

President.—Of course, in the splint making the veneers can be done by machinery. They would require chiefly manual labour.

Mr. Glass.—Can you give me some idea as to what labour they would require?

President.—Some sort of skilled labour.

Mr. Glass.—How many men would be required?

President.—I don't suppose they would exceed 500 men.

Mr. Glass.—You would not get local labour on that scale.

President.—Most of them I think will have to be Indians at that stage so that there is the same problem as in any other industry in Burma, whether it is a rice mill or a timber mill or any other mill. You have got these saw mills; do you find any difficulty in getting Indian labour?

Mr. Glass.—We do not find great difficulty, but in the jungle there is always the labour problem.

Mr. Mathias.—Would not there be considerable extra expense in packing the splints and sending them to the main factory?

Mr. Glass.—I think it would probably be cheaper than having the logs rafted or railed down.

President.—It does seem to be a feasible proposition if done on a large scale?

Mr. Glass.—Can you give me an idea of what is the measurement of match-wood obtained from a 50 ft. log?

President.—I have been trying to find out what the waste is but nobody seems to know. What they say is this, that out of a ton of 50 cft. they make 156 gross of boxes, that is to say both veneer and splint, but that does not give us any idea of what that means.

Mr. Glass.—One way to get at it would be to measure the 165 gross boxes and then take the cubic contents.

President.—I suggested to them that the simplest way would be to get the weight. It is very difficult to get the measurement of splints; 50 cft. of wood may be very much more compressed than boxes. The only other thing that I could think of was to get them to weigh the log and weigh the splints. Until that is done it is very difficult to say what it is really.

Mr. Glass.—You will have to make a calculation such as that to get at the wastage.

President.—I told the applicants to give me some of these figures.

Mr. Glass.—I presume you told them to take the weight of the log also?

President.—Yes. It will have to be on a fairly large scale; unless it is done right through by machinery on a mass production basis it would not pay at all.

Mr. Glass.—That is so.

President.—Until that is done, it is very difficult to say whether it is really advantageous.

Mr. Glass.—You will require to make calculations as to that on a similar basis.

President.—I have told some of the applicants to give me those figures. It will have to be on a fairly large basis. Unless it is done right through on a mass production basis, it won't pay at all.

Mr. Glass.—Quite so.

Exportation of match wood to India.

Mr. Mathias.—In the circumstances of the timber trade, would it be feasible for big firms such as yours to extract match wood on a large scale and export to India?

Mr. Glass.—I don't think so.

Mr. Mathias.—Owing to the difficulty of keeping wood fresh.

Mr. Glass.—Yes and also to the high cost of extraction.

Mr. Mathias.—Roughly per ton what would be considered sufficient to cover the cost of extraction?

Mr. Glass.—We could deliver the logs in Rangoon at Rs. 46.

Mr. Mathias.—And in Calcutta what will it be?

Mr. Glass.—It depends on what is charged for freight to take logs across.*

President.—Even then supposing it is Rs. 70 in Calcutta it would be so very difficult to arrange fresh wood that unless you accept petty contractors it would not be worth your while to take up extraction on a large scale for export.

Mr. Glass.—I don't think we can, considering market prices.

Dr. Matthai.—If, for example, the total demand from India on Burma comes to 100,000 tons, is it likely to make the business worth while?

Mr. Glass.—It would, if they offered us a price to cover our cost of extraction and a reasonable profit.

Dr. Matthai.—As regards Toungoo and Pyinmana Division, where do you think that the splint factory ought to be supposing we found that these forests had a reasonable supply of these woods?

Mr. Glass.—I should say somewhere on the railway line.

Dr. Matthai.—Somewhere between Toungoo and Pyinmana.

Mr. Glass.—Yes, or wherever else the Government considered suitable.

President.—What would be the longest distance the logs would have to go from the forest? Would it be 20 miles?

Mr. Glass.—The people working small concessions would probably be 4 to 5 miles from the railway line. When you want a big quantity like 100,000 tons a year these sources are soon exhausted.

President.—Government have not constructed any railways in the forest.

Mr. Glass.—Not to my knowledge.

President.—How do you run your railway system? Does it go right through or how do you bring it to the railway line?

Mr. Glass.—Logs are brought to our railway by means of buffaloes and our line runs from forest to Mill.

President.—Then for what distance would they have to be dragged?

Mr. Glass.—Up to 2 miles.

President.—You have got feeder lines.

Mr. Glass.—Yes.

President.—You just put the feeder lines as you go along.

Mr. Glass.—Yes.

President.—It is not such a big proposition as to make it remunerative for any man to build his own railway in the forest.

* *Vide* Statement, dated the 21th March, 1927.

Mr. Glass.—Laying a railway is a very expensive business. The price obtainable for Burma match woods is low yet they can actually import wood from Sweden.

Mr. Mathias.—But the Swedish cost is Rs. 120.

Mr. Glass.—You are talking about splints.

Mr. Mathias.—No, in the log.

President.—At present they get their log to the factory at Rs. 35 to Rs. 40, whereas the foreign log is about Rs. 150.

Mr. Glass.—The freight on round timber is much greater than on converted timber. We can get our supplies of foreign wood cut to candle box sizes very much cheaper than that c.i.f. Rangoon.

President.—Where does it come from?

Mr. Glass.—From Sweden. It seems to me a very high figure for such logs.

Mr. Mathias.—What kind of wood do you import?

Mr. Glass.—Pine.

Mr. Mathias.—For what?

Mr. Glass.—For candle boxes.

Dr. Matthai.—Can you tell me what is the freight on timber from here to Bombay?

Mr. Glass.—Rs. 22-8-0 per ton at the moment.

President.—I suppose you export your wood to all parts of India, Calcutta, Bombay and Madras. Could you give us freight rates afterwards?

Mr. Glass.—Yes, freight rates to the principal Indian ports.

Mr. Mathias.—If you could get say about Rs. 70 a ton for these match woods in Bombay and Calcutta, it would be a good proposition if the freight is only Rs. 22-8-0 to Bombay.

Mr. Glass.—That is on converted timber. It would be very much more for logs.

President.—What you want to know is the freight on round logs.

Mr. Glass.—Yes, I shall supply.

President.—Your firm does not do any business in matches.

Mr. Glass.—No.

President.—Which is the principal firm that does it? Binning & Co. used to do before.

Mr. Glass.—I cannot tell you.

President.—We have asked the Chamber of Commerce to come and give evidence. We have not heard from them. I think they would be able to give us information on that point.

Mr. Glass.—I should think so.

Extraction.

President.—Do you know Paunglin and Mahuya reserves?

Mr. Glass.—I don't know them.

President.—Are they in Insein Division?

Mr. Glass.—Yes, I believe so.

President.—We were told that in forests like Okkan and Tharrawaddy there are creeks running right through and the longest distance they would have to drag the logs before getting to water would be a mile or so. Is that your experience as regards some of these forests? Are there forests like that?

Mr. Glass.—Yes.

President.—These people say that they manage to get it through the smaller creeks into the bigger stream during the rains.

Mr. Glass.—*Mr. Robertson* will perhaps be able to tell you more about it. I have little experience.

President.—I take it the harder woods can remain in water longer without being spoiled.

Mr. Glass.—Yes, by their very nature.

President.—The softer woods however rot very quickly.

Mr. Glass.—Yes.

President.—Is it due to the insects or is it due to the fibre?

Mr. Glass.—Partly due to insects and partly due to the very perishable nature of the timbers.

President.—Do you apply anything to prevent the wood from drying?

Mr. Glass.—No.

President.—We were told that there was some application which would prevent the logs from being dried up.

Mr. Glass.—I don't know of any.

Mr. Mathias.—So that the sap does not get evaporated.

Mr. Glass.—I have not seen it done.

President.—When you apply for a concession, you have to tender.

Mr. Glass.—Yes.

President.—Have you found that it is a very satisfactory method of securing a concession?

Mr. Glass.—It seems to me to be the only fair way.

President.—Would it be possible for the Government supposing they went in for plantation to have a flat rate for particular species of wood? Of course, there may be a charge of favouritism levelled against Government.

Mr. Glass.—I think so.

President.—It is a very common complaint and for that reason you suggest that the tender system is the best.

Mr. Glass.—It seems to me to be the only fair method looking into present conditions. The Government, however, do not bind themselves to accept the highest or any tender.

President.—Sometimes they refuse the highest tender.

Mr. Glass.—Yes.

President.—*Mr. Adamjee* offered to pay a royalty of Rs. 12-8-0 which was never done before.

Mr. Glass.—It does seem a high rate.

President.—Rs. 5 to Rs. 6 would be considered a fair rate for that sort of wood.

Mr. Glass.—The farther you get into the forests your charges for transport become more costly.

President.—In floating logs is there a scramble due to the different contractors working the small streams?

Mr. Glass.—I should not think so. The logs are all marked.

President.—But in the narrower streams supposing you were extracting on a large scale and another small man comes there, cuts a tree and floats the same?

Mr. Glass.—There would be difficulties.

President.—Have cases arisen like that?

Mr. Glass.—Not so far as I know.

President.—We were told here that in these forests, if two or three men were extracting, then it may happen that one man blocks the streams altogether and another man may not get a chance for months together.

Mr. Glass.—That is the difficulty in the case of small streams. If you put in more timber than the stream can float out, there would be difficulties.

Dr. Matthai.—Wood like teakwood takes up a lot of space.

Mr. Glass.—Only when it reaches, and is rafted in the main stream.

Dr. Matthai.—I mean the rafting arrangements.

When it goes to the main stream, rafting would be twice as big as the wood itself.

Mr. Glass.—Less space is taken up by teak than other Hardwoods such as Eng or Pyinkado when rafted.

President.—Do the logs float by themselves? Do they have to take care of themselves?

Mr. Glass.—The elephants go down the small streams, break up dykes and push stranded logs back into the stream.

Mr. Mathias.—How long does it take for the soft woods to rot in water?

Mr. Glass.—I have no experience. Mr. Robertson will probably be able to give you some information. I know that logs deteriorate very rapidly in the dry forests.

Supervision by the Forest Department.

President.—Are the conditions in the forest concessions reasonably enforced or is there any trouble as regards penalties, etc.? What is your experience?

Mr. Glass.—I think Government are very reasonable. Everything is done in a businesslike manner.

President.—Do you experience any great delay in the Government Officers measuring the timber?

Mr. Glass.—No.

President.—You generally get it done at the proper time.

Mr. Glass.—Yes.

President.—In this class of wood if there is any long delay it would be prejudicial whereas in your case it would not be so. What is your experience? Do you generally get the man for measuring?

Mr. Glass.—Yes.

President.—There is no delay at the measuring station?

Mr. Glass.—No.

President.—Is it your experience here that sometimes a man gets a contract from Government and transfers it to somebody else?

Mr. Glass.—Some contracts provide for this and some don't. You cannot transfer your rights without the permission of Government.

President.—Have you come across any case where a Burman who goes and gets a concession which he is unable to work transfers it to you or somebody else?

Mr. Glass.—I have not heard of any.

President.—Do Government raise any difficulty as regards transfers?

Mr. Glass.—I don't know. I have no experience.

President.—You say that in some contracts they don't put in that condition as regards transfer.

Mr. Glass.—I think it is possibly put in all the contracts.

President.—In your case the question may not arise.

Mr. Glass.—Possibly not.

President.—What I wish to know is have you actually purchased any rights from any other licensee?

Mr. Glass.—Yes.

President.—Then you have taken the consent of the Government.

Mr. Glass.—Yes.

President.—Do Government make enquiries or is it a formal matter?

Mr. Glass.—It is not a formal matter.

President.—What sort of enquiries do they make?

Mr. Glass.—I don't know.

President.—In this enquiry that is rather a point of importance as to whether any third party can really work the forest taken in the name of another person altogether. That is why I am asking you whether the Government can really get at the real person working the forest apart from the name of the man in whose name the concession is taken.

Mr. Glass.—They are bound to know the man working.

Mr. Mathias.—What is to prevent a man from taking a coupe in his own name and apparently working it for somebody else? Government would not be able to ascertain that the contract has been transferred, because the contract would remain in the man's name.

Mr. Glass.—Once a lessee pays his royalty Government have no further claim on the timber and the lessee can do what he likes with his logs.

President.—The royalty is paid after extraction.

Mr. Glass.—It is ordinarily on hardwoods paid at the stump.

President.—It has to be measured.

Mr. Glass.—Yes.

President.—That would be done at the measuring station.

Mr. Glass.—It is done at the stump also.

Mr. Mathias.—So long as the contractor remains responsible to Government for the payment of royalty, that is all that Government look to.

Mr. Glass.—Government merely says that the royalty must be paid. After payment, they have no control over the disposal of the timber.

President.—You don't purchase any timber from other contractors?

Mr. Glass.—Yes, we do.

President.—Are they usually reliable as regards supplies?

Mr. Glass.—They might be better at times.

President.—In this case, the industry has to depend on contractors. It is a point of great importance whether they are able to supply wood. Have you found much difficulty?

Mr. Glass.—There is always difficulty.

President.—Is it due to difficulty in delay or what?

Mr. Glass.—Chiefly delay in delivery.

President.—These are ordinarily Burmese contractors, I take it.

Mr. Glass.—Yes.

Messrs. Abdoolali Ebrahim, Bombay.

Market prices of matches.

Kind.	1908.		1909.		1910.		1911.		1912.		1913.		1914.		1915.		1916.		1917.	
	Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.	
Swedish $\frac{1}{2}$ Sulphur	0 13 0	to	0 13 6	0 13 6	0 13 0	0 13 6	0 13 0	0 13 6	0 13 6	to	0 14 0	0 14 0	1 0 0	to	1 6 0	1 6 0	1 4 0	to	1 8 0	1 8 0
Swedish full Sulphur.	0 14 0	to	0 14 0	0 14 0	0 14 0	0 14 0	0 14 0	0 14 0	0 14 0	to	0 14 6	0 14 6	1 1 0	to	1 11 0	1 11 0	1 5 0	to	1 11 0	1 11 0
	0 13 6	to	0 15 0	0 15 0	0 14 0	0 15 0	0 14 0	0 14 0	0 14 6	to	0 14 6	0 14 6	1 7 0	to	1 14 0	1 14 0	1 9 0	to	2 0 0	2 0 0
Swedish $\frac{3}{4}$ safety	0 14 6	to	0 13 6	0 13 6	0 12 0	0 13 6	0 12 0	0 12 0	0 12 6	to	0 15 0	0 15 0	1 4 6	to	2 0 0	2 0 0	1 12 0	to	2 5 6	2 5 6
	0 13 6	to	0 14 0	0 14 0	0 12 6	0 14 0	0 12 6	0 12 6	0 13 0	to	0 13 0	0 13 0	1 5 0	to	1 2 0	1 2 0	1 2 0	to	1 8 0	1 8 0
Japan $\frac{1}{2}$ Sulphur	0 9 0	to	0 10 0	0 10 0	0 10 0	0 10 0	0 10 0	0 10 0	0 10 0	to	0 10 3	0 10 3	0 10 0	to	0 12 6	0 12 6	0 13 6	to	1 10 6	1 10 6
Japan full safety	0 11 0	to	0 11 0	0 11 0	0 10 6	0 11 0	0 10 6	0 10 6	0 10 6	to	0 11 0	0 11 0	0 11 0	to	0 13 0	0 13 0	0 13 0	to	1 2 0	1 2 0
	0 9 0	to	0 9 6	0 9 6	0 8 6	0 9 6	0 8 6	0 8 6	0 8 6	to	0 8 6	0 8 6	1 0 0	to	0 14 0	0 14 0	0 13 0	to	1 6 0	1 6 0
Japan flat safety	0 10 0	to	0 8 6	0 8 6	0 8 6	0 8 6	0 8 6	0 8 6	0 8 6	to	0 9 0	0 9 0	0 8 0	to	0 12 6	0 12 6	0 14 0	to	...	...
	...	to	0 8 6	0 8 6	0 7 0	0 8 6	0 7 0	0 7 0	0 7 0	to	0 7 6	0 7 6	0 13 0	to	0 10 0	0 10 0	0 12 0	to	1 0 0	1 0 0
Japan $\frac{1}{2}$ Phosphorous.	0 8 0	to	0 8 6	0 8 6	0 7 6	0 8 6	0 7 6	0 7 6	0 7 6	to	0 8 0	0 8 0	0 9 0	to	0 10 0	0 10 0	0 14 0	to	0 15 0	0 15 0
Japan $\frac{1}{2}$ Safety	...	to	...	...	...	...	...	...	...	to	0 8 0	0 8 0	0 8 0	to	0 10 0	0 10 0	0 13 0	to	1 4 0	1 4 0
Japan $\frac{1}{2}$ Sulphur	...	to	...	...	...	...	...	...	...	to	...	...	...	to	0 11 0	0 11 0	0 13 6	to	1 1 0	1 1 0
Sweden $\frac{1}{2}$ Safety	...	to	...	...	...	...	...	...	...	to	...	...	...	to	0 14 6	0 14 6	0 14 0	to	1 2 0	1 2 0
Sweden $\frac{1}{2}$ Sulphur	...	to	...	...	...	...	...	...	...	to	...	...	...	to	...	...	...	to	...	...

Market prices of matches—contd.

Kind.	1918.	1919.	1920.	1921.	1922.	1923.	1924.	1925.	1926.	1927.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Sweden $\frac{1}{2}$ Sulphur	1 8 0 to 1 11 0	1 14 0 to 2 0 0	1 11 0 to 1 14 0	2 8 0 ...	3 0 0 to 3 3 0	2 15 0 to 3 2 0	2 12 0 to 2 15 0	2 8 0 to 2 11 6	2 10 0 to 2 11 6	2 4 0 to 2 11 6
Swedish full Sulphur	1 12 0 to 1 13 0	...	...	...	...	3 2 0 to 3 4 0	2 12 0 to 2 15 0	2 13 0 to 2 15 0	2 11 6 to 2 15 0	2 8 0 to 2 14 0
Sweden $\frac{1}{2}$ safety	1 17 0 to 1 10 6	1 13 0 to 2 0 0	1 10 0 to 1 12 0	2 7 0	2 15 0	2 14 0 to 2 15 0	2 15 0 to 2 14 0	2 15 0 to 2 11 6	2 6 0 to 2 15 0	2 0 0 to 2 14 0
Japan $\frac{1}{2}$ Sulphur	1 14 6				Not imported.					
Japan safety full					Since not imported.					
Japan flat safety	1 3 0				Since not imported.					
Japan $\frac{1}{2}$ Phosphorus	1 6 0 to 1 7 0	1 5 0 to 1 7 0	1 8 0 to 1 9 6	1 8 6 to 1 11 0	2 7 0 to 2 8 0	2 7 0 to 2 8 0	2 7 0 to 2 8 0	Since not imported.	Since not imported.	Since not imported.
Japan $\frac{1}{2}$ safety	1 6 0 to 1 8 6	1 5 0 to 1 7 0	1 8 0 to 1 9 0	1 11 0 to 2 0 0	2 7 0 to 2 10 0	2 8 0 to 2 6 0	2 5 0 to 2 0 0	Since not imported.	Since not imported.	Since not imported.
Japan $\frac{1}{2}$ Sulphur	1 7 0 to 1 9 0	1 6 0 to 1 8 0	1 5 0 to 1 10 0	2 0 0 to 2 1 0	2 10 0 to 2 19 0	2 6 0 to 2 8 0	2 0 0 to 2 5 0	Since not imported.	Since not imported.	Since not imported.
Swedish $\frac{1}{2}$ safety	...	...	...	...	...	2 8 0	2 5 0	2 4 0 to 2 6 6	2 4 0 to 2 3 6	2 0 0 to 2 6 0
Sweden $\frac{1}{2}$ Sulphur	...	...	...	...	...	...	2 6 6	2 4 0 to 2 5 6	2 3 6 to 2 5 0	2 0 0 to 2 5 0

Abdul Rahim Ebrahim, Bombay.

Market prices of matches.

Kind.	10-9-1924.	3-10-1924.	17-4-1925.	20-7-1925.	20-3-1926.	• 21-6-1926.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Ambernath safety 1st $\frac{1}{2}$	2 3 0 to	2 1 0 to	1 13 0 to	1 14 0	1 12 6	1 9 0 to
Other Indian Factory safety	2 4 0 1 15 0 to	2 2 0 1 15 0	1 15 0 1 13 0	1 12 0	1 10 0 to	1 9 6 1 7 6 to
	1 15 6				1 10 6	1 8 0

Kind.	17-9-1926.	30-10-1926.	29-1-1926.	1-13-1927.	1-6-1927.	October 1927.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Ambernath safety 1st $\frac{1}{2}$	1 8 0	1 6 6 to	1 5 6 to	1 5 0 to	1 4 0 to	1 5 0 to
" 2nd $\frac{1}{2}$	...	1 8 0 1 3 0*	1 7 0 ...	1 6 0 ...	1 5 6 ...	1 6 0 0 10 0†
Other Indian factories safety $\frac{1}{2}$	1 6 0 to	1 5 0	1 4 0 to	1 3 0 to	1 2 6 to	1 2 6 to
Sulphur $\frac{1}{2}$ Ambernath	1 6 6	1 6 0	1 6 0	1 5 6	1 5 6	1 5 6 1 10 0 1 9 0
Sulphur $\frac{1}{2}$ Bombay match works	...	...	...	...	...	to 1 10 0 1 7 0
Sulphur $\frac{1}{2}$ Andheri Match Company	...	...	...	...	...	to 1 9 0

* Wastage.

† From Indian wood.

Affidavit submitted to the Board by Mr. Lallubhai Chumilal, Manager of the firm of Abdoolalli Ebrahim, Matchewalla, Bombay.

1. Lallubhai Chumilal, Manager of the firm of Abdoolalli Ebrahim, Matchewalla, hereby solemnly declare as under :-

1. That I had the following conversation with Match interests through his interpreter in regard to the proposed establishment of the Bombay Match Works at Kurla.

2. We were selling Agents of Swedish Matches, their main import agents being for a long time Messrs. Forbes, Forbes, Campbell & Co., Ltd., Bombay. In the year 1923 Mr. Bierman sent for me. After some conversation in connection with the sales of Swedish matches Mr. Bierman expressed a desire to meet all the partners in the firm of Abdoolalli Ebrahim and in accordance with his wishes the following gentlemen saw Mr. Bierman, at the office of the Western India Match Manufacturing Company—

1. Mr. Ismailji Abdoolally.
2. Mr. Goolamhussain Ebrahim.
3. Mr. Tyebally Ebrahim.
4. Mr. Harilal Mansukh.

3. Mr. Bierman inquired if it was a fact that we were going to start a Match Factory at Kurla: I replied in the affirmative and added that the machinery for same had already been ordered and shipped from Japan and experts were also already on the way to superintend the erection and working of the factory. Mr. Bierman then said that as we were his then selling agents of Swedish matches and if we also started to manufacture matches how could we continue to be his selling agents. To this I replied that owing to Swedish makers having departed from the past policy of supplying matches on indents and having started to compete with the indentors by carrying stocks in Bombay and selling locally to our customers, we were compelled to take to the business of manufacturing matches. Upon this Mr. Bierman stated that his home friends have also decided to erect match factories in India and that against their machinery and capital nobody will be able to hold out and that if necessary they would be prepared to undersell and sacrifice a hundred thousand Pounds in order to maintain a hold on this industry, in India and asked me whether we were prepared to lose and stand in competition with him.

4. Mr. Bierman also added that as we had been selling his matches since half a century he entertained friendly feelings towards us and he warned us as a friend to desist from the venture and stated that he was prepared to make good to us any loss that we may suffer owing to our abandoning the scheme. To this we replied that matters had gone too far for us to withdraw and that we could not comply with his request. Upon this the meeting broke up. In 1924 all of us were again invited by Mr. Bierman to see him when he told us that in spite of the friendly advice given by him to us we had embarked on setting up a match factory and that was not good. His principals had also erected factories in India and that he wished us to avoid being swept off by competition from his factory and he suggested to turn our factory into a Limited Company in which they should have shares, so that both factories could then work hand in hand without competing against each other. I said I would give him a reply after consulting other partners of the Kurla Works, and the meeting terminated and nothing further came out from Mr. Bierman's proposal. Sometimes later on when again I was asked by Mr. Bierman when I went to the office in course of my regular business I informed him that the proposal was not suitable to us and there the matter has ended.

5. I am informed that Swedish Company has a very large capital and if they undersell their goods in India the small factories which are now put up in India will be ruined and wiped off. I suggest that some steps should be taken to protect small factories, otherwise results which have followed in America on account of big trusts will take place in India.

6. The above statement is true to the best of my knowledge and information.

B.—ORAL.

Oral evidence of Messrs. LALLUBHAI CHUNILAL and HARILAL MAHASUKH, representing Messrs. Abdulali Ibrahim, Mr. PURSHOTAMDAS HUJABHAI, representing Messrs. Abdullally Shaikh Adam and Mr. LALLUBHAI JAICHAND SHAH, recorded at Bombay on Friday, the 9th December, 1927.

INTRODUCTORY.

President.—We are very much indebted to you, gentlemen, for coming to help us in this enquiry. Your evidence will be very valuable to us as regards prices and the method of distribution of matches in the market. Is there any association of dealers in matches?

Mr. Lallubhai.—No.

President.—Are all these firms that you represent very old firms?

Mr. Lallubhai.—My firm is 45 years old.

Mr. Purshotamdas.—My firm is established for the last 40 years.

Mr. Jaichand.—My firm is of two years standing.

President.—I suppose you imported matches both from Japan and Sweden?

Mr. Lallubhai.—Yes.

President.—Are you doing much import business at present?

Mr. Lallubhai.—No.

Mr. Purshotamdas.—We are importing some from Czechoslovakia.

President.—Do you do much business?

Mr. Purshotamdas.—Not very much. I also export matches to Africa.

President.—Do you get cheaper matches from Czechoslovakia than from Sweden?

Mr. Purshotamdas.—Prices are the same.

President.—Is there any working arrangement between Czechoslovakia and Sweden?

Mr. Purshotamdas.—They have both combined.

President.—Is there any special reason why you import from Czechoslovakia now?

Mr. Purshotamdas.—Because we cannot get any matches from Sweden.

Mr. Lallubhai.—They have stopped direct sales to Indian buyers from 1922 because they have got their own sales organization here. They send consignments direct. In the beginning for 6 or 8 months the Swedish Match Company did not supply goods to us and they made arrangements with other firms to outbid Japanese goods.

Dr. Matthai.—Does it mean this, that since 1923 none of you have had any dealings in Swedish imported matches?

Mr. Lallubhai.—From the end of 1922 they made arrangements with Messrs. Forbes, Forbes, Campbell and Company to import direct.

President.—Do you deal in Swedish matches through Messrs. Forbes, Forbes, Campbell and Company since then?

Mr. Lallubhai.—Owing to some dispute we have stopped business with that firm. We now sell Indian matches only.

President.—Do all of you deal only in Indian made matches?

Mr. Purshotamdas.—Yes.

Mr. Mathias.—Do you deal in matches made by the Bombay Match Works only or do you deal in matches manufactured by other firms too?

Mr. Lallubhai.—We deal in matches manufactured by almost all the factories.

Dr. Matthai.—Can I get a rough idea of the total turnover in matches represented by you?

Mr. Lallubhai.—30 to 40 thousand cases.

Mr. Purshotamdas.—20,000 to 25,000 cases of 50 and 1,000 gross both.

Mr. Mathias.—How many 50 and how many 100 gross cases?

Mr. Lallubhai.—We have not estimated that.

Mr. Jaichand.—9,000 to 10,000 cases annually of 100 gross each.

Dr. Matthai.—Are the figures that you have just given us pre-war or present figures?

Mr. Lallubhai.—Present figures.

President.—Do these figures represent all the Coal manufacture excluding the Swedish Match Company?

Mr. Lallubhai.—Yes. We herewith give figures of our sales for last few years.

	Cases.
1920	28,000
1921	22,000
1922	19,000
1923	24,000
1924	22,000
1925	20,000
1926	28,000
1927	20,000

President.—I suppose from 1924 to 1926 almost all of these would be the products of Indian factories?

Mr. Lallubhai.—In 1922 the agency for Swedish imported matches was stopped for 6 to 8 months. At the end of that year a new agency was formed with Messrs. Forbes, Forbes, Campbell and Company in addition to the three agents they already had.

Dr. Matthai.—Do you import direct from Czechoslovakia?

Mr. Purshotamdas.—We import through Messrs. Volkert Bros.

Mr. Lallubhai.—In 1922 they stopped the agency for 6 to 8 months; at the end of that year we two joined Messrs. Forbes, Forbes, Campbell and Company as agents and from April 1926 we became sole agents and in December 1926 we had a dispute.

President.—What sort of dispute?

Mr. Lallubhai.—The arrangement was that they should not sell any goods to outsiders. Then they sold some to Jamnagar.

President.—You mean for transshipment to Jamnagar?

Mr. Lallubhai.—Yes. Then we came to know of this and we asked them why they transhipped these to Jamnagar. They first of all denied that they had done that and when we gave proof that they had done so they said "as you could not sell our goods we had to sell these ourselves for transshipment to Jamnagar." Then we replied that "as you have infringed the agency arrangements we won't purchase any more of your goods unless you conform to the arrangements". Then correspondence ensued in connection with this dispute.

President.—In the meanwhile they had purchased factories in Norway, they had come to arrangement with Czechoslovakia and they had also acquired an interest in Japan and consequently they did not wish to do any further business with you; their object had been served. Was that the position?

Mr. Lallubhai.—As their object was served they stopped doing business with us. The quarrel was going on for a long time and we said that unless this dispute was settled we would not purchase any goods from them. *Mr. Fox*, the Manager of Messrs. Forbes, Forbes, Campbell and Company, said what we said was true but that they were not going to allow anybody to interfere in the matter. That was their last answer. They had obtained all the information that was necessary as to their customers and the selling market outside Bombay. They found out what dealers we were dealing with upcountry and they also understood the methods we employed in distributing the goods all over the country and afterwards they did not think it necessary to employ us. Messrs. Forbes, Forbes, Campbell made direct agencies upcountry and began selling direct. I may add that the head of the sales department of Messrs. Forbes, Forbes, Campbell and Company is a Swede.

President.—Do you mean to say that the staff of this company are all Swedish?

Mr. Lallubhai.—The head of the Sales Department has come from Sweden.

President.—Is he a servant of the Swedish Match Company?

Mr. Lallubhai.—Yes. The man in charge of the sales is a Swede and is a servant of the Swedish Match Company. Messrs. Forbes, Forbes, Campbell and Company merely take the commission. Another manager has now come from Sweden. The man who was originally at Messrs. Forbes' is now working in the Western India Match Company and the man who has taken his place is also a Swede.

Mr. Mathias.—Is he paid by Messrs. Forbes, Forbes, Campbell and Company?

Mr. Lallubhai.—Though the appointment is made by Messrs. Forbes, actually the money comes from the Swedish Match Company as far as I know.

Dr. Matthai.—As far as Messrs. Forbes are concerned, at present they do not work through any local dealers?

Mr. Lallubhai.—Yes. Messrs. Forbes sell goods to an association of 8 firms.

Dr. Matthai.—Do you mean association of 8 local dealers?

Mr. Lallubhai.—Yes. Originally the association was organized by us but when we withdrew this association of 8 dealers began working for them.

Dr. Matthai.—Formerly, I take it, all of you were members of this association of dealers?

Mr. Lallubhai.—This is an association of retail dealers. Ours was an association of wholesale dealers.

President.—You were given the sole agency during this period by Messrs. Forbes?

Mr. Lallubhai.—Yes.

President.—Did you employ these 8 sub-agents?

Mr. Lallubhai.—These people formed an association of 8 retail dealers.

President.—When you had this dispute with Messrs. Forbes your arrangements with them terminated?

Mr. Lallubhai.—Yes.

President.—Then when the arrangement was terminated Messrs. Forbes continued to employ the same 8 retail dealers to do the business; is that correct?

Mr. Lallubhai.—Yes.

President.—These 8 agents can only sell Ambarnath and Swedish goods?

Mr. Lallubhai.—Yes.

President.—Who are these 8 men? Can you give us their names?

Mr. Lallubhai.—They are:—Valley Suleman, Ranjee Ahmed, Hassanally Kasemali, K. Ebrahim Kurwa, Alibhoy Virji, Esmalji Tyebally, Cunnrudin Hakimji and Fazal Poermahomed.

Dr. Matthai.—Are they the biggest retail dealers in the Bombay city?

Mr. Lallubhai.—Yes.

Marketing arrangements.

President.—Just explain to us the system of working you employed when you were sole agents. Did you buy the whole production of the Western India Company and also all the imports from Sweden at certain rates or under what arrangement did you get the matches to sell? Were you merely commission agents?

Mr. Lallubhai.—We were only commission agents.

President.—What was the commission?

Mr. Lallubhai.—1 anna per gross, for the first six months and we had to pay a rebate to the retailers; then it was raised to 1½ annas out of which we had to refund a rebate to the retail dealers.

President.—Out of that did you have to pay any commission to your sub-agents?

Mr. Lallubhai.—Yes.

President.—You sold the goods at fixed prices?

Mr. Lallubhai.—Yes. What we did was this. First of all they gave the goods to us at a fixed price but there was a sort of undercutting amongst the retailers as regards prices and they did not pay sufficient attention to the sale of goods as to the amount of profit they could make. We then came to this arrangement; supposing the price of Swedish matches was Rs. 1-8-0 we would sell them at Rs. 1-9-0 and they were expected to sell at that price and that one anna extra was kept in a separate credit account and periodically this excess or one anna was distributed in certain shares among these 8 dealers according to the sales effected by them—one man getting 10 per cent, another man 15 per cent, and another 5 per cent, and so on as the case might be according to the quota. Each dealer was of course entitled to the packing case, so that whatever extra profit he made came out of the packing case. If he sold 100 cases he got his own profit of Rs. 4 per packing case or whatever it might be and that went to his pocket, but as regards the one anna per 100 cases that went into the pool. We first got one anna and 1½ anna later on as commission; on top of that we added one anna which represented the price of the retail dealers and that was pooled among the retail dealers and was distributed to these people by us.

Dr. Matthai.—The idea is that instead of competing amongst yourselves as dealers it was arranged to sell at a fixed price of Rs. 1-9-0 and then one anna out of this Rs. 1-9-0 went into the credit fund which was distributed according to the proportion of sales done by each dealer and on top of that one anna the retail dealer got the price of the case.

Mr. Lallubhai.—Yes.

President.—In the case of the larger packing case they got about Rs. 4-8-0 and for the smaller case for half size about Rs. 2. is that correct?

Mr. Lallubhai.—Yes.

President.—Did you see to it that they did not cut the price?

Mr. Lallubhai. Sometimes they did but only on rare occasions. We were able to check the price more or less.

Mr. Mathias.—Supposing they cut the price would you refuse to supply them?

Mr. Lallubhai.—Yes.

President.—This arrangement went on till the beginning of this year practically?

Mr. Lallubhai.—Our arrangement with them terminated about December 1926.

President.—And now they themselves are working under the same arrangement, are they?

Mr. Lallubhai.—They pay cash to Messrs. Forbes, Forbes, Campbell and Company and buy goods according to their requirements.

President.—In your time you sometimes gave them goods on credit?

Mr. Lallubhai.—Yes we used to give credit to the retailers but Messrs. Forbes do not allow that.

President.—What sort of credit did you give them?

Mr. Lallubhai.—From 15 days to 6 weeks credit.

President.—Messrs. Forbes do not allow any credit to the retailers?

Mr. Lallubhai.—No.

President.—But they are also under agreement not to sell any other matches except Ambarnath and Swedish?

Mr. Lallubhai.—Yes. In our time we allowed them to sell Kurla matches.

Dr. Matthai.—You have your own retail dealers now to sell your matches?

Mr. Lallubhai.—Yes.

President.—When you were acting as sole agents for Forbes, between the two of you what was the total business done? Would it be right to say that it would be 50,000 cases a year between two of you?

Mr. Lallubhai.—52,000 cases in 8 months.

President.—Did you get the same commission for full size and half size or did the commission vary?

Mr. Lallubhai.—At first they were paying us one anna for the half size and 1 anna 6 pies for the $\frac{3}{4}$ and full size but afterwards 1 anna 6 pies was made the uniform rate for both sizes.

Dr. Matthai.—That was before the war?

Mr. Lallubhai.—No, in 1926.

Dr. Matthai.—Since the war you have not sold full size in Bombay, have you?

Mr. Lallubhai.—No, except in sulphurs.

President.—Your commission was $1\frac{1}{2}$ annas and you gave them one anna and 9 pies for the case; that is about 3 annas 3 pies would be the commission that they had to pay before the goods passed on to the retailer. Now of course they save the $1\frac{1}{2}$ annas that they were paying you.

Mr. Lallubhai.—Yes.

President.—On top of that there must be Forbes' commission whatever it may be?

Mr. Lallubhai.—Yes.

President.—Who takes from these retailers.

Mr. Lallubhai.—Panbiriwalas and smaller dealers. Then again these retail agents have got their own shops. They are a sort of oilman stores. They sell matches along with other goods.

President.—Will they sell even a dozen?

Mr. Lallubhai.—Yes, but generally they sell by the gross.

President.—They sell at the price fixed by the Swedish Match Company?

Mr. Lallubhai.—Yes.

President.—Then the panwala may sell at any price he likes?

Mr. Lallubhai.—Yes.

President.—There is no control of prices after the matches leave the retailer's shops?

Mr. Lallubhai.—No.

President.—Is it true that one box in the bazar is sold ordinarily at one pice?

Mr. Lallubhai.—Swedish matches are sold at 4 pies and Indian made boxes at 3 pies; that is half size, and $\frac{3}{4}$ size Swedish is sold at 6 pies. Full size is not sold in the Bombay market.

President.—Is the $\frac{3}{4}$ size that is sold at half an anna of Swedish manufacture?

Mr. Lallubhai.—Yes.

President.—The imported half size is sold at $4\frac{1}{2}$ pies.

Mr. Lallubhai.—2 boxes for 3 pice.

President.—How much is the Indian made box sold at?

Mr. Lallubhai.—One pice each.

President.—How much is sold by the box in Bombay.

Mr. Lallubhai.—20 to 25 per cent. would be sold by the box.

Mr. Mathias.—Do they sell 3 of these boxes for half an anna (shows a Santa Cruz brand)?

Mr. Lallubhai.—That is sold at one pice each or three for half an anna.

President.—What is the price per dozen now?

Mr. Lallubhai.—2 annas a dozen for Indian matches. There are about 500 hawkers in the town who sell by the dozen.

Dr. Matthai.—Do you mean people who hawk matches about?

Mr. Lallubhai.—Yes.

President.—At what price do they buy from the dealers?

Mr. Lallubhai.—Rs. 1-4-0 per gross and they sell at 2 annas a dozen or they might sell at one pice each.

Dr. Matthai.—Taking your own experience, as far as the Bombay city market is concerned the consumer gets the bulk of his supplies direct from these retail general merchants, is that right?

Mr. Lallubhai.—Yes, from these retail dealers generally.

Mr. Mathias.—You say of the total sale about 25 per cent. is sold either in single boxes or at less than a dozen; of that 25 per cent. how much would be sold in single boxes only, that is one box for one pice and not 3 boxes for half an anna?

Mr. Lallubhai.—15 per cent. at one pice a box and the remaining 10 per cent. at 2 pice for 3 boxes.

Dr. Matthai.—Supposing I go to one of these biriwalas and ask for a single box and ask for three boxes, do I get at the same rate or do I get a favourable rate if I ask for 3 boxes at a time?

Mr. Lallubhai.—The panwala will sell at one pice each whether you take three boxes or one.

Dr. Matthai.—I take it that the position as far as the biriwalas are concerned is that they account for 25 per cent. of the sales of matches in the city?

Mr. Jaichand.—50 to 60 per cent. is sold by the half gross.

Dr. Matthai.—What I want to know is if you to make a rough estimate of the total sales done by the general merchants and the total sales done by the biriwalas, would it be right to say that the total sales by the biriwalas is about 25 per cent. of the total sales in the city?

Mr. Lallubhai.—The pan and biriwalas will sell only 6 or 7 per cent. and the major portion of the sales will be effected by the hawkers.

Dr. Matthai.—Can you tell me roughly what is the percentage?

Mr. Lallubhai.—The total sales by panwalas and hawkers will come to 20 per cent. The association of retail dealers have got a motor lorry to distribute matches to panwalas. That motor lorry has been supplied by Messrs. Forbes and the petrol is supplied by the association; the driver's wages are also paid by Messrs. Forbes. This motor lorry goes round and distributes matches by the gross or by the dozen as the case may be.

President.—That is as regards the sale of the Western India Match Company's matches. Your business is entirely confined to the Indian firms such as the Bombay Match Works, the Andheri Match Company and so on, is it not?

Mr. Lallubhai.—Yes: we also sell other Indian made matches.

Mr. Purshotamdas.—We are also agents for the Andheri Match Company and we sell other Indian made matches also. Two factories have opened their own establishments and others have their own agents.

President.—Most of the factory owners have their own agents while two have their own establishments: who are these two?

Mr. Lallubhai.—The Andheri Match Company and the Santa Cruz Match Company, Titvala and Thana Match Works also sell through their own establishments and the rest have their agents.

President.—Then there are no big agents at all?

Mr. Lallubhai.—No.

President.—There are all these small dealers who deal direct with these factories?

Mr. Lallubhai.—Yes. There is no organization just now. Either they come to the factory and say "send such and such matches to such and such places" or buy through their agents.

President.—When you were doing business for Messrs. Forbes what was the total amount of your sales? What capital did you put into the business?

Mr. Lallubhai.—We only required Rs. 2 lakhs capital because we did not store any matches at all. We took our requirements from Forbes' godown direct.

President.—Stocks had to be carried by Messrs. Forbes, Forbes, Campbell and Company?

Mr. Lallubhai.—In fact Forbes have no stocks at all, because as a consignment arrives from Sweden they sell it.

President.—What is the advantage of their keeping Forbes as agents and paying them this commission?

Mr. Lallubhai.—No advantage except that it is a British firm, whom they wish to benefit.

President.—Messrs. Forbes used to indent for you or what did they do?

Mr. Lallubhai.—Formerly they were indenting for Abdulally Shaikh Adam up to 1921. In 1921 two directors of the Swedish Match Company came to India. They asked us why we were not selling their matches for some time and selling Japanese matches. We said during the war we could not get any Swedish and therefore we had to start business with Japan. Now as Japanese $\frac{1}{2}$ size is generally sold here, if you make $\frac{1}{2}$ size in Sweden, gradually your goods will also be current here as $\frac{3}{4}$ size was going out of use. We asked them as to when they would be able to make this $\frac{1}{2}$ size. They gave us to understand that if they determined now they would be able to turn out $\frac{1}{2}$ size by two years. We therefore indented our requirements from Japan accordingly. Again in 1922 they came to India when the duty was levied at Rs. 1-8. They told us that they had made $\frac{1}{2}$ size and told us to buy from them. We told them that in 1921 they had told us that they would be able to make half size in 2 years and had consequently ordered out our requirements from Japan. We also told them that as the duty was enhanced and we had heavy stocks, as well as large quantities were already indented by us, we were actually making a loss, inasmuch as the market had not gone high to the extent the duty was raised. For these reasons we told them that we could buy small quantities at that time and as the goods became current we would buy more and more. They told us that they would reply to this after going to Sweden. They went home and wrote to various indenting houses through which we were ordering not to book anything from us and also told them that they did not wish to sell goods by indents but wanted to sell by consignments through Forbes only. Messrs. Forbes were also told that no goods from consignment should be given to us but new

agents should be appointed to compete with us. Accordingly Forbes appointed 3 new agents and the terms with these 3 new agents were that they should not sell any other goods except Forbes's.

Dr. Matthai.—Messrs. Forbes, Forbes, Campbell and Company do not touch Indian made matches at all, do they?

Mr. Lallubhai.—No. They sell only Swedish and Ambarnath matches.

President.—Who are your retailers?

Mr. Lallubhai.—We are a very old firm of 50 years' standing and we have got a lot of connection in the upcountry markets so that whenever any goods are required our man there informs us and we sell either for cash or on credit as the case may be. When Messrs. Forbes saw that it was not possible to push their goods and compete with us, they called us and took our co-operation along with the three agents they had appointed. We were at that time free to sell any other goods. When the arrangement was first made in 1923 it was very unsatisfactory for everyone of us to deal with all these labels and then it was arranged that these labels must be distributed amongst five of us; then they kept five general labels. The idea was that all these labels were supplied to five of us. The prices were fixed and these were superior labels. The labels distributed amongst the others were inferior, the idea being they would not be able to raise the price of the inferior labels because the price of the superior labels was always controlled by them.

President.—Have the Swedish Company got inferior labels?

Mr. Lallubhai.—Yes. In sulphur the superior labels were Antelope, Three Star, Goat; and in safety, Flower Basket, Three Star, Special Lion & Ship.

Mr. Mathias.—What about the "Ship" brand?

Mr. Lallubhai.—Ship is also superior. There were about 8 inferior labels in all. At that time we were at liberty to deal in other matches and when they found that their matches were not being pushed they gave this sole agency to us. We agreed to sell their matches provided they let us sell matches of our own manufacture along with theirs and they agreed. We were selling Japanese matches before we came into this arrangement with them but since we came to this arrangement we discontinued getting Japanese, Czechoslovakia and Norwegian matches.

Dr. Matthai.—Since how long have Forbes been interested in the match business?

Mr. Lallubhai.—They were indentors originally and they did business as indentors for Abdulally Shaikh Adam.

Dr. Matthai.—How long have they been doing it? Did they start this consignment business long ago?

Mr. Lallubhai.—The consignment business was started by the Swedish people. They discontinued indenting business in 1922 and then they started this consignment business.

Dr. Matthai.—Do you sell matches outside the Bombay Presidency?

Mr. Lallubhai.—Most of our goods go outside Bombay, to the Punjab, Nagpur, Itwari, Gujrat, Karachi.

Dr. Matthai.—You don't sell in Calcutta, do you?

Mr. Lallubhai.—No.

Dr. Matthai.—In Madras?

Mr. Lallubhai.—Yes, and also in Mysore, Secunderabad, etc.

President.—It has been suggested that Swedish matches come through Kathiawar and sell cheaper in British India; is that correct?

Mr. Lallubhai.—Yes, in Ahmedabad and Gujrat.

President.—How do you know that?

Mr. Jaichand.—I was a partner with M. M. Badroodin in 1922 and I know this from personal experience. Before the imposition of this duty of

Rs. 1-8-0 Japanese matches used to come to Kathiawar. When this duty was levied the Jamnagar dealers approached them and they agreed to supply matches at 10 annas a gross, c.i.f. The price was c.i.f. Bombay 10 annas and it cost them 2 annas from here to Bedibunder so that they got it at 12 annas c.i.f. Bedibunder. Then this duty of Rs. 1-8-0 was levied which brought their price up to Rs. 2-4-0. At first they were selling these at Rs. 2 at Bedibunder and they also used to sell these at Veerangaon at Rs. 2 including freight. Then we said "if you want to do business on a large scale reduce the price" and they reduced the price to Rs. 1-13-0 at Bedi which is in Jamnagar State. We sold these matches at Delhi at Rs. 2 to Rs. 2-2-0 and we took 2 or 3 annas commission which is the difference between Rs. 1-13-0 and Rs. 2. We did business like that for 1 to 1½ years.

Mr. President.—How much did you do?

Mr. Jaichand.—We sold about 6,000 cases. Then the British Government stopped transshipment for about 6 months from 15th September 1923 to 24th April 1924 and then they allowed transshipment again. Then they stopped doing the business openly after 1924. Now what was done was this. They began to deal direct with the Swedish Match Company and transhipped matches very often at Karachi. The Swedish Match Company did not like to do this business in Bombay but did not mind doing it in Karachi. As soon as Government put the Customs barrier goods did not come in on any large scale. Jamnagar has not got a single box of match manufactured in India; all the matches sold there are Swedish matches.

Mr. Lallubhai.—One of the methods to stop this would be to use labels and we consider that would be the best solution.

Dr. Matthai.—It won't help you to get the market at Jamnagar. Have you been doing large business in the Kathiawar States?

Mr. Lallubhai.—No. We are not able to sell in the Indian States except at Bhavnagar. My contention is that since this high duty has been levied the Indian States are not using Indian matches at all. They are using Swedish matches.

Dr. Matthai.—What is the total consumption of matches in these States?

Mr. Lallubhai.—4,000 to 5,000 cases a year for the whole of Kathiawar and if they import more than that it means they are selling some of the goods in British India. The requirements of Jamnagar State would not amount to more than 2,000 cases a year. Now of course they are allowed to import the goods from the Kathiawar ports on the production of a certificate that the duty has been paid.

Dr. Matthai.—You are not suggesting that the certificates are being wrongly issued?

Mr. Lallubhai.—We do not dispute the certificate but we suspect that a secret rebate is being paid.

President.—Have you got the c.i.f. rates for a number of years?

Mr. Lallubhai.—Here is a list showing the rates from 1908 (handed in).

Dr. Matthai.—What prices are these?

Mr. Lallubhai.—They are wholesale prices. Even on these figures it will be seen that the price of Ambarnath matches are 2 annas higher than other Indian matches.

Mr. Mathias.—Are these Ambarnath prices for half size or are they for full size matches?

Mr. Lallubhai.—For half size.

President.—It is true that as regards the first quality matches the Ambarnath prices are 2 annas higher, but they also produce a second quality the prices of which are about 3 annas lower and a third quality which are 5 to 6 annas lower, is that correct?

Mr. Lallubhai.—Yes, but not in large quantities.

President.—What is the motive?

Mr. Lallubhai.—Ambarnath are putting these very inferior quality matches into the market in order to bring Indian matches made out of Indian wood into disrepute.

Dr. Matthai.—As regards your prices for Indian matches are they made of Indian wood or aspen?

Mr. Lallubhai.—Made of Japanese aspen.

Dr. Matthai.—I find from your list that the price of Ambarnath matches has been coming down steadily since October 1926 and quite recently from the 1st December it has gone up again.

Mr. Lallubhai.—Prices go up or come down according to the quantity purchased.

Dr. Matthai. You give the price of Ambarnath matches in this list as Rs. 1-6-6; that becomes Rs. 1-4-0 in June 1927; it goes up to Rs. 1-5-0 on the 1st December. I presume there has been a general increase in the course of this month in the price of Ambarnath matches?

Mr. Lallubhai. It may be due to the fact that this is the time of the year when there is a seasonal demand for it and the supplies are not equal to the demand. That may be one reason or it may be that they have raised the price because the Tariff Board are enquiring into the prices. The reason why they are doing it now is probably because everybody is complaining that they are reducing the prices and that is why they have again increased their prices.

Dr. Matthai.—If they have increased their prices do you get the benefit of the higher price?

Mr. Lallubhai.—The Indian prices also have gone up of late but the profit goes to the commission agent. As regards ourselves we have kept the same price.

Dr. Matthai.—From your statement of the 29th November 1926, which was practically the same season as now, we find that your price was Rs. 1-4, but now your price is Rs. 1-5-6. That is to say your prices correspond more or less to wholesale prices, is that right?

Mr. Lallubhai.—The rate for our matches is Rs. 1-5-0; that has remained more or less the same. The difference in the price all depends on the labels. Ours (Kurla) is a higher rate; the lower rate is given for the other factories. The idea is that for better labels the prices are more. For glazed labels it is Rs. 1-6-0 and for unglazed labels Rs. 1-5-0 and Rs. 1-5-6.

Mr. Mathias.—Are they all aspen matches, these Indian made matches, or do they also include Indian wood matches?

Mr. Lallubhai.—For Ambarnath the boxes are Indian wood and splints are made of aspen. Their prices are higher because they are in a better position to control and organize the market. Other factories have to take their prices a little lower because they have not got the market. At present Ambarnath are not manufacturing second quality stuff.

Afternoon.

President.—One of the points to be considered is what should be done as regards the Government revenue. One of the alternatives suggested to safeguard the revenue is the imposition of an excise duty. If an excise duty is levied the idea would be to enable the Government more or less to get the same revenue as they would have from the import duty after making allowance for the increased revenue they are getting from the duty on logs, chemicals and other raw materials.

Excise duty.

Mr. Lallubhai.—My reply is that the amount of excise duty which the article can bear is 6 annas per gross. If a 6 anna duty is levied the retail price can be still one pice a box and for the dozen 2½ annas. The idea is that at present there is this margin from which if you take away 6 annas

it would not make any difference except to the retailer. With the 6 annas excise duty they can still retail boxes at one pice each but the price per gross as sold by dozens would go up from Rs. 1-8-0 to Rs. 1-14-0. We calculate it this way: just now if you take the factory price at Rs. 1-4-0 to Rs. 1-4-6 the price per gross is Rs. 1-8-0, leaving a difference of 3 annas 6 pies. Then if you raise the factory price from Rs. 1-4-0 to Rs. 1-10-6 and the retail box is sold at 2 annas 6 pies a dozen or Rs. 1-14-0 a gross, the difference between the two remains exactly the same, namely 3 annas 6 pies. If you raise the price of the gross by 6 annas and the retail price by 6 pies the purchaser may not buy by the dozen at all but he may prefer to buy a single box because it naturally saves him 2 pice.

Dr. Matthai.—At present let us take the factory price to be Rs. 1-4-0. If the single box is sold at a pice per box, then it comes to Rs. 2-4-0. That means a difference of Re. 1 between the factory price and the retail price. On that basis the total middleman's charges amount to Re. 1 which is the difference between Rs. 1-4-0 and Rs. 2-4-0. When an excise duty of 6 annas is levied the difference is reduced from Re. 1 to 10 annas. With the middleman's profit of 10 annas would it not be possible for the retailer to still sell a box at 3 pies?

Mr. Lallubhai.—The factory owners sell to the agents, not to the retailers.

Dr. Matthai.—What I am thinking of is this. Here is the factory and there is the biriwala at the other end; there are two or three parties between them at present and they are making at present a commission of one rupee. Supposing we put an excise duty of 6 annas and reduce the difference from 16 annas to 10 annas, that would still make it possible for the retailer to sell at 3 pies a box, would it not?

Mr. Lallubhai.—Yes.

Dr. Matthai.—I want your opinion on this point. The present difference is one rupee; up to what difference would it be possible for the retailer to sell at 3 pies a box?

Mr. Lallubhai.—This difference of 10 annas, so far as Bombay is concerned, may be a little higher, but if you take the whole country you cannot reduce it below 10 annas because there are other charges to be incurred by dealers in the mufassal such as commission, freight, interest on goods sold on credit and so on. The sale in Bombay will not be affected very much.

President.—Supposing the factory price is reduced to one rupee by a reduction in the cost of production, could Government increase the excise duty to the same extent?

Mr. Lallubhai.—Government can increase the excise duty in proportion to the reduction in the factory price. If you are to have second class matches and are to sell them at the factory at one rupee and under, then it would be possible for the retail box to be sold at 2 pies per box. So far as our second class matches are concerned, that is those made out of Indian wood, they are sold in the villages at 2 pies per box. If you increase the import duty by 6 annas also, the price of foreign matches will remain the same and the money will be transferred from the pockets of the retailer to those of Government.

Dr. Matthai.—Now the wholesale price of imported half size matches is Rs. 2-4-0; supposing we put a corresponding increase in the import duty by 8 annas assuming that the excise duty is also 8 annas, then the wholesale price of imported Swedish matches half size will become Rs. 2-12-0 instead of Rs. 2-4-0. When that price becomes Rs. 2-12-0 what will be the retail price for a single box?

Mr. Lallubhai.—The price will remain the same, 3 annas 6 pies for dozen.

President.—Supposing there is a duty of 12 annas.

Mr. Lallubhai.—If you are putting 12 annas excise duty, then it will be necessary to put an additional one rupee customs duty so that the price of foreign match goes up and the difference is maintained, otherwise if you increase the customs duty by only 12 annas the foreign matches will be in a more favourable position.

Dr. Matthai.—Supposing we increased the import duty by 12 annas and then the wholesale price of imported matches half size becomes 3 rupees. If the wholesale price is 3 rupees the retailer cannot any longer afford to sell the boxes at 1½ pice because 6 annas would be too narrow a margin.

Mr. Lallubhai.—He can.

Dr. Matthai.—At present the price of a half size match is Rs. 2-4-0 per gross. If you add the duty of 12 annas it becomes 3 rupees. If it is sold at 4½ pice a box that means that it becomes Rs. 3-6-0 a gross which leaves him only a margin of 6 annas against his present margin of over a rupee.

Mr. Lallubhai.—If you put an excise duty of 12 annas the price of foreign matches goes up from Rs. 2-4-0 to Rs. 3 leaving a margin of 6 annas. Then if you put the same excise duty on Indian matches the wholesale price goes up to Rs. 2; therefore there is a margin of four annas only. Therefore I say that Indian matches at Rs. 2-4-0 would be at a disadvantage as compared with Swedish matches at Rs. 3-6-0.

Dr. Matthai.—And therefore you suggest that the import duty must be increased by one rupee against an excise duty of 12 annas?

Mr. Lallubhai.—Yes.

Excise labels.

President.—Now as regards labels

Mr. Lallubhai.—If they were compelled to put on the excise labels here then I do not think it is necessary to put an excessive import duty, but if you allow them to put labels in their own country then this difference will have to be maintained. If you put on the same duty, that is if you increase the import duty by 12 annas and they are compelled to put on labels it would mean 2 annas extra expenditure for them. They will then have to sell their retail boxes at 2 pice which will leave the retailer a very big margin of Rs. 1-6-0 and which would therefore be an inducement to him to sell more Swedish matches than Indian matches. So long as you maintain a difference of half a pice between their retail price and ours you can put on any duty you like. As regards the sale by the dozen you must maintain a difference of 1 anna 6 pice and then only we can hold our own against foreign matches.

Mr. Mathias.—Supposing we put a higher duty on aspen?

Mr. Lallubhai.—If you put a duty on aspen which makes the price of the match go up by 4 annas a gross, about one-third of the population will still continue to use aspen, but gradually Indian wood might displace aspen.

Dr. Matthai.—With a duty of Rs. 1-8-0 you have found during the past few years the import of Swedish matches has been gradually declining. The trade figures show a gradual decline in the imports of Swedish matches into India.

Mr. Lallubhai.—Not because of the duty but owing to the starting of Indian factories and transshipment business in native states.

Dr. Matthai.—I am speaking of the quantity. The quantity imported from other countries into India has been steadily declining.

Mr. Lallubhai.—The reduction in the imports was due to the opening of factories here after the imposition of this duty and transshipment.

Dr. Matthai.—What I am asking you is this. Supposing no change were made at all in the tariff, that is to say the present tariff arrangements continued, in how many years' time do you expect the import of Swedish matches to cease altogether?

Mr. Lallubhai.—15 per cent. of the imports will still continue to come.

Dr. Matthai.—That is something like a million or a million and a half. Speaking from your experience as a dealer in Bombay, could you say what is the quantity of imported Swedish matches which would be bought here in Bombay whatever may be the price?

Mr. Lallubhai.—10 to 15 per cent. of the annual consumption in Bombay.

President.—The second point is this. Supposing a sales organization is formed, that is to say there is a sales organization either by Government or any other private agency, will you be able to organize a company for that purpose?

Mr. Lallubhai.—Yes, it is a feasible proposition to have an organized sale by means of a private company under some control of Government. Government cannot do it because if we want the goods Government will take 4 days to supply. If we want the goods to-day they will supply 4 days hence. Government won't give any credit either whereas 90 per cent. of the business is done on some sort of credit.

President.—Leave out the Government monopoly. Supposing a company is formed in Bombay?

Mr. Lallubhai.—There won't be any difficulty in floating such a company. But there would be objection on the part of manufacturers because they think their profits come more from the sales than from the manufacture.

President.—The next point is the question of quotas.

Mr. Lallubhai.—It would be possible for Government to fix these quotas for different factories and to arrange with the sales company to purchase them at such prices as may be fixed.

Dr. Matthai.—On what basis would the prices be fixed? Supposing there are only one or two qualities and one or two labels.

Mr. Lallubhai.—If the manufacture is by private undertakings the quality will never be maintained and the smaller factories will have to close down. The result would be that the whole business would pass into the hands of the more experienced foreign firm.

Dr. Matthai.—Smaller factories cannot compete with bigger concerns and will in any case eventually come to an end.

Mr. Lallubhai.—If you were to fix a fair selling price on the basis of the larger factories then the smaller factories will not be able to hold their own and will have to close down gradually. If you don't put an additional excise duty on the Swedish Trust and leave the smaller factories to their fate, they will have to be closed down. We don't want Government to do any business; we want a special excise duty to be put on the Swedish Match Company; if that cannot be done, then leave them as they are.

Dr. Matthai.—What is the rate of special excise duty that you would suggest?

Mr. Lallubhai.—4 annas more than what the Indian match companies would have to pay.

Dr. Matthai.—Do you think that would be effective?

Mr. Lallubhai.—Yes.

Dr. Matthai.—Supposing they paid 4 annas out of their own pocket to compete against you?

Mr. Lallubhai.—I don't think they will continue to pay 4 annas out of their pockets.

Dr. Matthai.—4 annas per gross out of their own pocket may not be too much for them.

Mr. Lallubhai.—If they are to pay 4 annas out of their own pocket, on their estimated production at present of 5 million, it would mean that they would have to spend about Rs. 12½ lakhs out of their pocket. If they are prepared to lose Rs. 12½ lakhs we are prepared to fight.

President.—To what length would you be prepared to fight?

Mr. Lallubhai.—Eventually we must find ourselves unable to compete, we know that. But if you put on 4 annas special excise it would suffice for our purposes because we do not think the Swedish Match Company would continue to go on as it does now. 4 annas difference between their price and ours would just enable us to compete on the present prices.

President.—If they want to fight against you they can go to any length, can they not? They have immense resources at their back.

Mr. Lallubhai.—They cannot push us out of existence; they might be able to do so for a time but once they have got the control of the market they will have to raise their price again and as soon as they do that we shall come in again and start business.

Dr. Matthai.—If we levy a special excise duty of 6 annas I believe there will be a fresh application for protection next year!

Mr. Lallubhai.—In the end we mean that they should be turned out of the country by Government.

Dr. Matthai.—Then the best thing is to suggest a special excise of 2 rupees!

President.—Is there any speculation in the market on the proposals of the Board?

Mr. Lallubhai.—No. People have not got large stocks just now. Usually there is a bigger demand at this time of the year and it is for that reason that prices have gone up.

President.—Are the premises where matches are stored licensed?

Mr. Lallubhai.—Yes, in big cities; in the mufassal also there is a system of licensing wherever there are municipalities.

President.—Have you got any large stocks at present?

Mr. Lallubhai.—We have not got any big stock.



सत्यमेव जयते

M. G. Kale, Esq., Warda, Bombay Presidency.

Letter, dated 3rd November 1926.

As I have five years' experience of this industry working as manager of the National Match Works at Agra Road, Chatkepar, Bombay, since 1922, as also working as an Assistant Manager in the Western India Match Company, Limited; at Ambernath services with the Swedish Match Company; and also as I have started two more factories in the suburbs of Bombay and one in Orissa, I think I am in a position to put forth my opinion as regards the changes to be made in import duty on finished matches and splint and veneers and on imposing the direct tax on local match factories.

When the tax was imposed only on finished matches in 1922, the advantage was taken of this duty only by the merchants of Bombay and Calcutta who were already dealers in matches, and almost all Behra merchants who have opened factories in the beginning with Japanese in partnership in one form or the other. When again in 1924 the duty was imposed on splints and veneers, the same manufacturers brought in peeling and chopping machines from Japan which are used on Japan (Aspen) wood only. The Swedish Match Company brought their own Swedish peeling and chopping machines who can use Indian wood to advantage (though still these require investigations for utilising great many species of Indian woods at different parts of India).

Now, the fact is that by starting factories by these merchants, the technical side of the Industry has been left with the Japanese only. Swedish Match Company have also got their own technical men and hence no Indian man could take the chance of getting himself proficient with the technical side of the industry as it was all the time kept secret. The Indians are only trained how to run machines only. As far as I can understand these manufacturers have not the moral courage to take up this industry to the last and make improvements but as long as there is such heavy duty on matches and as long as they can take out mass production they may keep the concern going; if not, they will be willing to close the factories entirely.

Now, the condition of India as regards this industry is such that cottage industries can be much more profitably worked in India than mass production. But because of lack of sound technical knowledge amongst well educated Indians and because of proper impetus not yet given to the development of cottage industry, this Industry is not yet developed on proper lines.

In my opinion to give an impetus to cottage industry, a duty of annas three per gross should be imposed directly on all the match factories which take out mass production on Indian capital and a duty of annas six per gross on match factories supported by foreign capital. This direct duty will not induce merchants to go in for foreign production. Now the matches are sold at Re. 1-6-0 per gross and after the imposition of direct duty it will be sold at Re. 1-9-0 per gross. Moreover when the prices range between Re. 1-4-0 and Re. 1-12-0 per gross, the general public is not affected at all because the retail matches are sold at one match box for one pice. The profit goes to merchants only. So there will be absolutely no change in the situation of the market in matches by imposing such direct duty but it will no doubt give rise to cottage industries.

Cottage industry as I mean can take out an output of 100 to 200 gross per day and hence mass production should mean an output of 300 gross and over per day. Cottage industry for match manufacturing cannot be started with a meagre capital of Rs. 2,000 or 3,000 as some manufacturers on Calcutta side have tried with Indian machines. But at the same time it should not invest more than Rs. 10,000 and within this amount a good factory can be started with combination of either German or Swedish machinery and Japan machinery and much of the work, where there is much waste on machines, is to be done by hand labour profitably.

I remember the Patna Government has started a demonstration match factory to train up experts and to spread up prospects of this industry. But as far as I could understand from report, the factory is started on wrong methods unsuitable for Indian financial condition. The factory is started with most up-to-date machines, no doubt, but the combination of all those machines is not necessary to run the factory economically.

As for myself I am now trying to start my own factory at Nagpur on cottage industry basis with my own above-mentioned ideas where I wish to give practical training to ambitious well educated men who will start their own factories independently or in partnership with men of their circle.

This is all what I could explain through letter and hope that proper consideration will be made towards developing this match industry on proper lines.

Mr. N. B. Mukerjee, Bengal.

(1) Letter, dated 1st November 1926.

With reference to the letter No. 235-T. (14), dated 2nd October 1926, received from the Assistant Secretary to the Government of India, Commerce Department, Simla, enclosing a copy of the recent Government resolution on the above-mentioned subject, I have the honour to state the following facts for your kind consideration for the interest of development of industry in India and Government revenue from this source.

(a) *Effects of a high revenue duty and a protective duty.*—Though it is true that a high revenue duty has naturally a protective effect but a protective duty actually helps a proper development of the particular industry in the country in the most satisfactory manner, which a high revenue duty certainly cannot. Of course it is a well-known fact that match industry cannot be made commercially successful without investment of a huge capital on match machines. But a capitalist who desires to invest his capital on a sound basis cannot invest a huge sum on match machines relying on a revenue duty which may be abolished at any moment. Had the duty been a protective one I am sure that more capital would have been invested by the Indian people for proper development of this industry, by this time. I have formed that opinion from my personal practical experiences for canvassing for German match machines in the Indian market. Of course speculation and investment on a sound basis are quite different things. Taking the advantage of the revenue duty some speculators have started match industry no doubt but capitalists who want safe investment could not come forward. So this duty should be made a protective one considering what civilised countries in Europe did in this respect to safeguard their local match industry against Swedish competition.

(b) *What other civilised countries in Europe did in this respect.*—From the Administration Report of the Swedish Government (available in India Government Commercial Library in Calcutta) for the year 1922, you will see that Swedish Government explicitly admits that it is quite impossible for the Swedish match manufacturers to continue their industry in such a huge scale for high protective duties levied by different countries in Europe. French Government has the monopoly of match making in the country. Spain, Portugal, Italy have levied a high protective duty to safeguard the interest of the local manufacturers.

(c) *Swedish-American combine to monopolise match industry in India and several Japan match factories in Calcutta to avoid Government duty.*—I am sorry to note that there is no mention about this firm and several Japanese match factories, in the Government resolution. Most probably the Indian Government is aware that foreign capitalists have started several match factories in India to avoid the customs duty of the India Government. This Swedish-American combine have come in India to monopolise this industry.

They import match wood in the log form from abroad, so their productions fetch better prices than the matches produced from the Indian wood. They even do not print "made in India" on the label. Calcutta Match Manufacturing Association have already drawn attention of the Government on the subject. "Amrita Bazar Patrika" and "Forward" already drew the attention of the Government in a special article "Foreign danger in match industry in India" in the issue of the papers of 27th December 1925.

When in the year 1923 some Japanese capitalists tried to import stick and box veneers from Japan to produce finished matches here to avoid Government duty, the Government levied a heavy duty on imported untipped sticks and box veneers to stop this bad practice. Now these foreign capitalists are the main causes of affecting the Government revenue from this source so seriously that their cases should be very carefully considered. In the present days of unemployment these foreigners whose chief aim is to avoid Government duty should not be allowed to make huge profit at the expense of the poor Indian consumers. As long as they are in the field (without any duty levied on their production) Indian capitalists will not venture to run in competition with them, so actual development is much hampered thereby.

(d) *How loss of customs revenue can be made up.*

- (i) By levying a duty rupee one per gross of match boxes produced in factories with foreign capital, who started factories in India only to avoid Government duty. They have no technical difficulties.
- (ii) By levying a duty on imported match wood in the log form (matches from imported wood fetch better prices).
- (iii) A small duty on Indian big scale manufacturers after a few years when they are properly established.

(e) *Interest of the consumers.*—The Government has desired to lower the duty for the interest of the consumers. In this connection, I must point out that interest of the consumers is already saved to some extent by competition among the local manufacturers. The wholesale price of a gross of match boxes (full size) was Rs. 2-12-0 only in 1923 which is now Re. 1-11-0 only. I am sure that the present price will go down gradually as soon as the Indian factories attain their full production.

I am the recognised match expert of Madras, Central Provinces, Mysore, Punjab and United Provinces Government, so I am connected with many factories in India. If the Government pleases, and agrees to pay my halting and travelling allowance, I shall be always glad to appear before your Board in Simla to give other particulars in this connection. Please acknowledge receipt of this letter and oblige.

(2) *Letter, dated 30th December 1926.*

With reference to your Press Communiqué, dated 29th November 1926, regarding investigation of the question of granting protection to the Match Industry in India, I have the honour to state the following facts for kind consideration of the Board:—

(A) *Grounds on which the Match Industry in India can be considered to fulfil the condition laid down in paragraph 97 of the Report of Indian Fiscal Commission.*

1. (a) As regards the first condition, raw materials of match industry such as suitable wood, sand and some of the chemicals required are available in large quantity in India. This view has also been supported by the Government of India, Bengal, Bombay and Bihar and Orissa in their reports regarding match industry.

(b) As regards labour question, work in a match factory is light, easy and interesting and will suit juveniles and adults of both sexes who are incapable of doing any heavy and outdoor work.

(c) Cheap power can be easily secured for this industry.

(d) There is a large home market for matches in India which will be evident from the following facts and figures gathered from Government records:

In the year 1922-23 (when practically there were a few match making concerns in India) the total import of matches into India was 11,285,740 gross of boxes valued at Rs. 1,61,80,658 only. [Vide Report on possibilities of match industry, Bihar and Orissa Government.]

2. As regards the second condition, we find from the administration report of the Swedish Government that many European civilised countries had to levy a high protective duty to safeguard the interest of the local manufacturer against *Swedish competitions*. So this industry cannot be properly developed in India against *Swedish and Japanese competitions* unless and until protected by the Government in every possible ways. So the second condition has been fulfilled in this case also.

3. As regards third condition, I must quote what Mr. Troup observed in the India Government Report on "Prospect of match industry in Indian Empire."

"Any one who has studied the question of match manufacturing in India minutely from all sides will unhesitatingly answer that India is herself capable of manufacturing every match she requires and that there is a great future before the match making industry in India." This industry is sure to stand world's competition when the labourers will be properly trained and proper plantation of suitable trees will be done in the neighbourhood of factories to lower the cost of wood and when technical difficulties of Indian factories will be duly solved.

(B) *Difference of the effects of the high revenue duty and the protective duty into Match Industry in India.*

As the India Government (Commerce Department) states in the resolution No. 235-T. (14), dated 2nd October 1926. It is true that a high revenue duty has naturally a protective effect, but a minute consideration over this point will reveal that a protective duty actually helps a proper development of the particular industry in the country in the most satisfactory manner, which a high revenue duty certainly cannot in such a manner. As regards this particular instance it is a well known fact that match industry cannot be made commercially successful without investment of a large capital on match machines. But a capitalist who desire to invest his capital on sound basis, cannot invest a huge sum on match machines relying on a revenue duty which may be abolished at any moment. Had the duty been a protective one I am sure that more capital would have been invested by the Indian people for proper development of this industry by this time. I have arrived at this decision from my personal practical experiences for canvassing for German match machines in the Indian market. Of course (1) *speculation* and (2) *investment on sound basis* are quite different things. Taking the advantage of revenue duty some match importers, who had a good knowledge in this line, have no doubt started match industry, but capitalist who wants safe investment could not come forward. So this duty (Re. 1-8 per gross) on the imported matches should be *protective one* considering what European civilised countries have done in this respect.

(C) *Foreign danger in Match Industry in India—Swedish American combine to monopolise Match Industry in India,—so protection in another form is also required.*

Most probably the India Government is aware that Swedish American combine, with a capital of Rs. 15 crores, having directors like Mr. Percy A. Rockefeller of America at their back have started match factories in India, to monopolise this industry and to avoid the custom duty of the Government of India on imported matches. They import match wood from abroad in the log form (to avoid India Government duty on imported sticks and box veneer), so their productions fetch better prices than the matches produced from

Indian wood. They even do not print "Made in India" on the label. Calcutta match manufacturing Association have already drawn the attention of the Government on the subject. "The Armita Bazar Patrika" and "Forward" drew attention of the Government in a special article "*Foreign danger in match industry in India*" in the issue of their papers of 27th December 1925. In the year 1924, when some Japanese capitalists tried to import *untipped sticks and box veneers* from Japan to finish them in Calcutta to avoid Government duty, India Government was pleased to levy a heavy duty on imported sticks and box veneers to stop this bad practice.

Now these foreign capitalists (Swedish American Combine and some Japanese match manufacturers) are the main causes of affecting the Government revenue from this source so seriously. So their cases should be very carefully considered. In the present days of *unemployment among the middle class educated people*, these foreigners, whose chief aim is to avoid India Government duty should not be allowed to make a huge profit at the expense of poor Indian consumers. Moreover as long as they are in the field (without any duty levied on their production), Indian Capitalists will not venture to run in competition with them (who have no technical difficulties). So actual development of this industry with Indian capital is much hampered thereby.

(D) *How loss of revenue may be made up.*

(1) An import duty of *annas four only per lb.* should be imposed on imported wood suitable for match industry as matches produced from imported wood fetch better price than the matches from Indian wood.

(2) An excise duty of *annas six only per gross* should be levied on the production of all Indian match factories having average daily output of more than 300 gross of boxes but less than 1,000 gross and an excise duty of twelve annas only per gross in the case of factories having daily average output exceeding 1,000 gross of boxes on the undernoted grounds.

It is desirable that a very heavy duty should be imposed on foreign capital invested for starting match factories in India only to avoid India Government custom duty on matches. But if it is done, I am afraid, these existing foreign Indian factories will play off another trick upon the Government. They may wilfully wind up their business and appear under the name of their Indian clerks and patrons to avoid the Government duty. Practically speaking there will be a "*Benami transfer*" in order to cheat the Government. Secondly the new foreign enterprises will have also recourse to the same tricks; they will actually start factories in India in the name of their *Indian Agents*. In both the cases the foreigners will control the management from behind the screen. Viewed in this light, the duty on foreign capitals will be a farce and fail to safeguard Indian interest. I therefore suggest the above-mentioned measure.

If the Government be pleased to accept this suggestion it will bring a heavy pressure upon Indian factories run with foreign capital for naturally these factories are all big concerns having daily output of more than 1,000 gross of boxes. I suggest the limit to 300 gross simply because profits accrued after meeting the heavy expenditure on European Experts and establishment from factories of this type will not be attractive to the foreign capitalists.

The existing *bonâ fide* Indian big concern may be apparently affected but they should not murmur as they have still a protection of *Re. 1 only per gross* of boxes (*i.e.*, nearly 100 per cent. *ad valorem*) and as the proposed measure will exert every influence to check the foreign intruders in India.

The advantages derived from this measure will give an impetus to the development of match industry by thousands of unemployed educated men on a *Cottage industry system as well as on a moderate factory scale* (having daily output of less than 300 gross), with a fair capital provided the technical trade secrets are known to them.

(E) *Interest of Consumers.*

The Government has desired to lower the duty for interest of the consumers in India. In this connection I must point out that interest of the consumers

are already saved to some extent by competition among the local manufacturers. Wholesale price of a gross match boxes (full size) was Rs. 2-12-0 in 1923 which is now Re. 1-11-0 only *though the rate of import duty is the same*. I am sure that the present price will go down further as soon as the number of factories will increase by taking the help of protection and these factories attain their full production. Moreover in these civilised days matches are used by the rich and the poor, so every body must admit that this tax is very fairly distributed over all communities. If this duty is lowered, the Government is sure to make up the loss of revenue from this source by taxation on some other articles. So this rate of duty (Re 1-3-0) per gross should not be lowered because the foreign competitors will get advantage in that case.

Mr. C. V. Mudaliar, Madras Presidency.

Letter, dated 27th December 1926.

I humbly beg to say, that I support the same resolution, which was passed in the Executive Committee of the Indian Match Manufacturers' Association, Calcutta, as I am one of the members of the above Association.

K. C. Sen, Esqr., Calcutta.

Letter, dated 30th December 1926.

With reference to your Press Communiqué, dated the 29th November 1926, I beg to submit that I am one of those who strongly believe that the Match Industry satisfies all the conditions laid down in the Report of the Indian Fiscal Commission in regard to industries claiming protection and venture therefore to submit this representation for consideration of the Board.

Most of the points referred to in your Communiqué have been exhaustively dealt with by me in a book, entitled "The Match Industry in Danger," a copy of which I beg to submit herewith for favour of your perusal. It will be seen that most of the difficulties I foresaw in 1924 when the book was published, have arisen and I am sure that others will also arise unless the remedies suggested are applied without much delay.

Replying to the question regarding the retention of the import duty on the existing scale, I beg to submit that the Match Industry in India is bound to collapse if the existing duty is reduced. It has not yet had time nor opportunity to solve its technical difficulties so that at present the margin between the cost of production and the selling price leaves a very little profit to factories while the cottage producers earn only what may rightly be called the wages of their labour. Besides some of the imported matches are being sold, I think, at cut prices to regain the Indian market. These prices after paying the duty differ only by a few annas per gross from the price at which the products of the Indian factories are sold. Any reduction, therefore, as has already been mentioned, would be ruinous to the Indian manufacturers.

Replying to whether the industry satisfies the conditions laid down in the Report of the Indian Fiscal Commission, I beg to submit that—

- (a) Numerous factories as also match manufacturing on cottage scale have come into existence during the last few years. This development has, as has been admitted by the Government of India, caused a large drop in the revenue on matches.
- (b) That it has natural advantages is emphasised by Mr. R. S. Troup in his book, entitled "The prospects of Match Industry in the Indian Empire," published in 1910 under the authority of the

Government of India. The last few years' experience has only added weight to the assertion that "There is a great future before the match-making industry in India" made by that far-sighted economist. It may only be added that excepting a few chemicals and zinc sheets, all other materials are or can be manufactured in India.

(c) It has already been mentioned above that without under the protection of the existing duty it is impossible for the industry to develop. But in order to enable the country to enjoy the benefits of this duty, an excise on the products of factories financed wholly or in part by foreign capital is essentially necessary. The amount of such excise, considered effective by me, is annas eight per gross in the case of the former and in proportion to the amount of foreign capital employed in the case of the latter. Without this the Indians can never hope to hold their own. If no such excise is raised, the interest of the Indians, both manufacturers and consumers and of revenue, will suffer to the exclusive benefit of the foreign capitalists. The question is whether we want the foreigners to drain our financial resources or whether we want the Indians to have a fair chance in the domain of commerce and industries and the foreigners to earn without being able to injure their Indian competitors.

(d) I believe that it will be possible for the industry to flourish without protection after, say, 15 years, since by that time we expect to train our labour, to avoid loss due to the present want of experience and insufficient technical knowledge, and to take advantage of other favourable circumstances. This has been the case everywhere and there is no reason why it would be otherwise in India.

Before suggesting categorically the measures of protection for the development of the industry, I beg to draw the attention of the Board to the distress prevailing in India due to unemployment. There are countries where the Government contributes to unemployment insurance. But there are no such paternal legislation in this country—the unemployed here are doomed to starvation. Some industries therefore ought to be protected in such a way as will help these poor people to make a living without leaving any possibility of these,—their bread-earning work being snatched away from them by foreign capitalists. Match Industry is undoubtedly one of those industries that can be carried on in one's own home with no difficulty to find market. Its adequate protection will go a long way to solve the problem of unemployment. It is indeed a matter for regret that owing mainly to the want of a timely protection numerous small cottage concerns in Bengal have already shut down.

Great Britain with all her industrial skill and accumulated experience has found it necessary to pass a safeguarding of Industries Act. I leave it to the Board to decide how much more need has India of legislation of that kind.

I beg, finally, to submit that the industry should be given protection in the following manner:—

- I. By retaining the duty on imported matches, splints and veneers at the present scale for about 15 years.
- II. By transferring the above duty from the revenue to that of protective schedule.
- III. By the imposition of an excise at the rate of annas eight per gross on the products of factories financed wholly by foreign capital, the rate of excise to be charged from factories financed by mixed capital being in proportion to the foreign capital employed.
- IV. By taking steps to facilitate extraction and transport of the required species of wood from forests and to replant it to maintain the supply.
- V. By reducing the freight on the carriage of raw materials, specially wood, charged at present by Railway and Steamship Companies.

- VI. By steps being taken to check profiteering in raw materials.
- VII. By enabling the manufacturers to obtain match-wood from the Government reserved forests at reduced royalty rates.
- VIII. By the conservation of the required species of wood and forest areas for use of the industry.

P. C. Roy, Esqr., Khulna, Bengal.

Letter, dated 31st December 1926.

With reference to your Press Communiqué, dated 29th November 1926, regarding the protection of match industry, I beg to put in my views on the subject as follows:—

Match industry requires greater protection than any other industry in India. The three conditions for the protection of any industry laid down in paragraph 97 of the Report of the Fiscal Commission of 1921-22 are amply fulfilled in case of Match Industry in India as it possesses all natural advantages for considerable development.

1. (a) Wood—the principal raw material for the industry is plentifully available in this country; with proper facilities by reduction of Railway and Steamer freights, it can be made available at all places throughout the country.

(b) Coal and petrol for producing the power are abundant here and available at a cheap cost. Electrification schemes taken up in different parts of India make electric power available at a cheap cost very soon in the principal towns.

(c) Labour is cheap and sufficient and though unskilled can be easily trained in this industry.

The earning of an Indian individual is the lowest in the world and can thus be cheaply engaged in this industry even after training.

(d) The outturn has a ready home market, as it is an every day necessity for every household.

2. But this industry cannot develop at all without the help of protection.

An attempt was made to manufacture matches first in Bengal some 30 years back. This as well as several others that followed collapsed for (a) want of suitable wood being made available and (b) in consequence of foreign competition.

At last in the year 1907 a systematic research for suitable wood was made in the factory started by the late Sir Rash Behari Ghose. The Government Forest Department helped this research by sending woods from their different forests. After a long experiment involving considerable expenditure, the proper woods for matches were discovered but the factory could not succeed by reason of competition with foreign matches under specially favoured circumstances.

As soon as the higher import duty on matches was imposed the old factories opened their doors again and several new others came into existence. Since then the industry has developed to a certain extent, though the progress is slow on account of imperfect protection against foreign exploiters.

To throttle this infant indigenous industry in its own country the foreigners started big factories in India with their unlimited resources of skill, capital and transport facilities of foreign wood under specially reduced freight in their own steamers. Moreover, they are putting up unfair combat by underselling their products in the markets created or likely to be created by indigenous smaller factories, thus compelling the latter to close down or sell their assets to these designing people. The Indian manufacturers being apprehensive of their intention made joint representations to the Hon'ble Member of the Commerce Department sometime ago and are still looking up to him for a fair basis of competition.

But for this indigenous design of the foreigners to evade the import duty by an indirect method and an unfair and unequal combat as expressed in underselling their outturn, indigenous match factories with Indian wood would have developed to a fair extent even in this short period.

(3) There is no doubt that match industry with proper protection will develop considerably and will eventually be able to face world competition without protection.

The natural advantages as put forth in (1) will ultimately make the industry very successful and there is every possibility of the products of indigenous factories being exported into foreign countries after satisfying the full demand of India.

Mr. Troupe, the late Forest Economist, rightly observed that "It is a question of time when India will not only manufacture her own requirements but will export her matches to other foreign countries."

Under these circumstances I would suggest the following steps both for protection of this industry as well as for recoupment of the falling revenue of the Government in this connection.

(1) The custom duty imposed at present on imported finished matches, splints and veneers should be converted into a protective duty on the same scale.

(2) Protective duty on match logs should be imposed at not less than Re. 1-8 per cubic foot, one cubic foot of log being taken as yielding four grosses of matches. Indian factories working with foreign logs will not suffer, as the products from such logs usually sell at a higher rate than those from local wood. Adoption of this measure will lead to a greater demand for indigenous wood and will develop another source of income to the Government in the shape of an increase in the forest revenue.

(3) A suitable excise duty of not less than 12 annas per gross should be imposed on the production of factories—three-fourths of the capital and directors whereof are not Indian, as suggested by the minority report of the Industrial Commission.

I strongly object to the imposition of any sort of taxation on the indigenous factories for some time to come, as this will at once create additional advantages to the foreigners and the Indian factories will be smothered.

(4) On the other hand, I would suggest adoption of suitable measures for the transport facilities of Indian match wood throughout the country by securing a suitable reduction of Railway and Steamer freight, to lessen the cost of manufacture on this head, as well as for the sake of forest revenue.

It will not be out of place to mention here that the actual fall of revenue due to the import duty is not so high as it appears to be. Match manufacture in India has increased the import of chemicals, papers and wood, etc., and has increased the consumption of wood from Government forests. The increased revenue on these heads considered along with its apparent fall on matches would show the figures much less.

The actual fall in revenue will be further lessened by the adoption of the measure suggested above, which will also protect this indigenous industry at its child stage and help it on from its struggling existence to a fully developed adult condition in a short period when it will afford to be free and helpful to the revenue itself.

Mr. J. B. Williams and other Merchants of Surat.

Copy of letter, dated 27th January 1927, from Mr. J. B. Williams and others of Surat to the Secretary to His Excellency the Viceroy and Governor General in India.

We the public Associations and merchants request your Excellency and your Tariff Board to consider over the match duty again as the last copy

attached, and reduce the duty in protecting the advantages of the Government's Customs increase of imports and the European and Foreign trades.

Copy of enclosure to the above letter.

We all the public associations and merchants beg to bring to your Excellency's kind attention the great deeply considering matter that in many parts of India and mostly in Bombay and Calcutta there have been established many match manufacturing factories on great scale and day by day increasing, and they are selling their matches on great profit and competing with those of the foreign made matches and selling the Indian made matches at less rate than the cost of the foreign matches, because the foreign matches have to pay heavy customs duties while the Indian factories have to pay no heavy duty. Therefore the foreign match factories and Government are losing by reducing the import of foreign matches, the duty than before. In competition the Indian match factories are saving the advantage of Government duties while the Government are in disadvantage of duty very highly.

Therefore we request and hope that Your Excellency will give your kind attention to fix the duty on Indian match factories as much as ruling on foreign match factories in the Government customs, to bring on equal cost and to bring the increase in Government duties.

Letter from the Tariff Board, to Messrs. Mitsui Bussan Kaisha and Messrs. Eng Hing Hwat Bros., Rangoon, dated the 25th March 1927.

I am directed to say that under the orders of the Government of India the Tariff Board is holding an enquiry into the question of the grant of protection to the Match-making Industry in India and in this connection requires information regarding the price of imported Japanese matches. I am therefore to ask if you would be kind enough to supply the Board as soon as is convenient to you with a statement giving the annual average prices of imported Japanese matches c.i.f. Rangoon for the years 1912-13, 1913-14 and from 1921-22 to 1926-27.

Messrs. Mitsui Bussan Kaisha, Limited, Rangoon.

Letter dated the 30th March 1927.

With reference to your letter No. 246, dated the 25th instant, we have the honour to state below the annual average sale prices of imported Japanese matches c.i.f. Rangoon, for the years 1921-22 to 1926-27. The prices for the years 1912-13, 1913-14 are not traceable:—

	Rs.	A.	P.
1921-22	86	0	0
1922-23	66	1	0
1923-24	60	5	0
1924-25	49	2	0
1925-26	46	11	0
1926-27	49	15	0

The unit of prices is per case of 600 dozen boxes, full size.

Messrs. Eng Hing Hwat Bros., Rangoon.

Letter dated 31st March 1927, from L. Choon Fong, Esq., Rangoon, to the Tariff Board, Calcutta.

With reference to your letter No. 246, dated the 25th March 1927 and addressed to my clients Eng Hing Hwat Bros., I have the honour to reply under their instructions as follows:—

Re 1912-13 and 1913-14, my clients are unable to furnish you with particulars as they had not then started their match business. They say that Messrs. Chip Hwat of No. 244, Dalhousie Street, Rangoon, may be able to enlighten the Board for that period.

Re 1921-22 to 1923-24, my clients state that they have already sent their account books to Eng Hing Hwat Bros. of Japan at No. 2, Strand Road, Japan.

In 1925, annual average price of imported Japanese matches ranged from 44 to 49 Yens per case for the 1st class matches and from 38 to 40 Yens per case for the 2nd class.

In 1926, the price was between 36 and 40 Yens per case for the 1st class and 32 and 36 Yens per case for the 2nd class.

In 1927, my clients have so far imported only 1st class matches and the prices range from 26 to 28 Yens per case.

The Kemmendine Match Company, Limited, Rangoon.

Letter dated 1st April 1927.

In response to your request to receive samples of imported Swedish matches as well as matches manufactured locally by the Burma Match Company, Limited, we send you herewith the desired samples. You will notice that most of the Swedish matches are of full size, and for your information we beg to inform you that we are at present not importing any other size to Burma, although we still carry a limited stock of $\frac{3}{4}$ size.

Our wholesale price of Swedish matches is at present Rs. 132 for 50 gross, Rangoon delivery. The ultimate retail price averages annas 3-6 per packet of 10 boxes. The wholesale price of local matches manufactured from Aspen wood (manufacture of this quality has now been discontinued) is Rs. 90 per 50 gross; the retail price in Rangoon is two annas per packet. The wholesale price of local matches manufactured from local wood is at present Rs. 84 per 50 gross and the retail price is two annas per packet.

Messrs. Hiranand Lekhraj, Karachi.

Letter dated the 8th December 1927.

I have been watching and studying the whole proceedings of your Board with keen interests and attention, especially the various evidences deposed by several witnesses. In addition, I would like to take liberty of expressing a few suggestions which I hope will be received in good faith and bestowed due attention.

At the outset, I would state that I quite concur with the suggestion, already put forth by some witnesses, that the import duty levied on foreign matches imported into India should be maintained in absence of which:

there is no likelihood of Indian industry thriving. But this consideration should not be lost sight of that the Government Revenue should in no way decrease than 1924-25 and, at the same time, due protection to be provided for the supply manufactured inland. The both purposes will be served if the present duty levied at the rate of Re. 1.8 per gross is altered and regulated as under:—

Rs. 2 per gross may be imposed on non-safety matches, the quantity of which imported at present is not quite ignorable. Raising the duty by 8 annas per gross on this sort of matches would in no way affect the general customer, as these matches are not quite in common use except in certain places.

Re. 1.8 per gross may be imposed on the ½th size of safety matches, as at present, and Re. 1 only per gross may be imposed on the half size c safety matches the quantity of which is imported practically nothing from foreign countries. Thus not only the deficit that would be effected in the Government Revenue by the last category would be made good by the surplus made in the first one, but it will increase to great extent.

The second point I would like to suggest is that the competition prevailing at present between the foreign and the country safety matches should be brought under control by introducing system of granting licence for the sale of matches for each principal town, exactly similar to the one followed by the Excise Department with regard to liquor shops, etc., that is a licence may be sold by public auction and given away to the highest bidder for a certain fixed period, say, three years. But in this regard one provision should essentially be laid down that the auction should be restricted preferably to those persons only who have absolutely no concern, directly or indirectly, with any foreign industry, located in or outside India.

The Railway freight charged on Indian wood as well as matches made in India is quite abnormal. Therefore, in order to sell the inland matches and Indian wood at a cheaper price, the same should be classified under class 1st of the Railway instead of class 8th as at present.

I have been dealing in the matches line since last several years, and in my opinion, if the above suggestions are duly weighed and put into force I believe the Indian industry will be amply protected against the foreign ones, and the Government Revenue too will increase a great deal.

Mr. A. P. Ghose, Calcutta.

Letter No. 60, dated the 16th January 1928, from the Secretary, Tariff Board, to Mr. A. P. Ghose, M.S.C.I. P., 257, New Park Street, Ballygunge, Calcutta.

I am directed to ask whether you would find it convenient to give evidence in connection with the Tariff Board's enquiry into the manufacture of matches, more particularly as a cottage industry in Bengal, before the Board at 11 A.M. on Tuesday, the 14th February, 1928, in the office of the Board at No. 1, Council House Street, Calcutta.

Letter dated the 21st January 1928, from Mr. A. P. Ghose to Mr. C. B. B. Clee, Secretary, Tariff Board.

I beg to acknowledge receipt of your letter No. 60, dated 16th instant and in reply have to say that as I shall be away from Calcutta for a few weeks from the end of this month I am very sorry I shall be unable to give evidence in connection with the match industry enquiry.

Letter No. 90, dated the 23rd January 1928, from the Secretary, Tariff Board, to Mr. A. P. Ghose, M.S.C.I., Ballygunge, Calcutta.

I am directed to refer to your letter of the 21st instant in which you express your inability to appear before the Board in Calcutta, and in reply to say that as the Board attaches much importance to your giving evidence it would be very glad if you could kindly reconsider your decision and arrange to appear on the 14th February next.

Letter No. 106, dated 27th January 1928, from the Secretary, Tariff Board, to Mr. A. P. Ghose, M.S.C.I., Calcutta.

In continuation of this office letter No. 90, dated the 23rd January 1928, I am directed to inform you that the Tariff Board regrets that owing to changes in its programme, it has become necessary to ask if you could appear to give evidence at 11 A.M. on Thursday, the 9th February next, instead of on the 14th as originally arranged. Please intimate if this alteration is convenient to you.

Letter dated the 30th January 1928, from Mr. A. P. Ghose to Mr. C. B. B. Clee, I.C.S., Secretary, Tariff Board, Dehra Dun.

I beg to acknowledge receipt of your letters Nos. 90 and 106, dated 23rd and 27th instant respectively. I regret very much that it will not be convenient to me at all to give evidence before the Board.

The Andhra Valley Power Supply Co., Ltd., Bombay.

Letter No. B.A.-219/27, dated the 7th December 1927.

We have perused the brief account that appeared in the "Times of India" of the 26th ultimo, of the evidence tendered by the Thana Match Works in favour of protection for the industry. The representative of the Match Works is stated to have been precluded from utilising electric drive on the ground of high unit rate quoted by this Company.

As the evidence tendered may lead to the belief that the growth of nascent industries like the match works is retarded or hampered by lack of cheap power supply, we desire to convey that we have never been approached by the Thana Works for supply of power. We would also observe that the energy requirements are so small (the factory being worked in this case by an oil engine of 22 H. P.) as to preclude us, under the terms of our license, from quoting rates and giving the supply direct. It is only in bulk that our Company supply power, and our rates are:

- 725 anna per Board of Trade unit for power only.
- 8 anna per Board of Trade unit for power and Transformers.
- 9 anna per Board of Trade unit for power, Transformers and motors, i.e., complete equipment.

Where, however, consumer's requirements fall short of 500,000 units a year, the consumer has to obtain his power from the retail distributors who in turn get it from us in bulk. The distributing licensees for the Thana area are—

Messrs. P. Patel and Company,
Electrical Engineers and Contractors,
Abba Buildings, Carnac Road,
Dhobitalao, Bombay

A representative of our Company took the opportunity of interviewing the Manager of the Match Factory at Thana with regard to the alleged application to us for power. No application could be found on their record in spite of a search, and we are told that it may have been destroyed. As already stated, we have no record of having received such an application in this office.

Mr. I. Kodama, Osaka, Japan.

Letter from Mr. H. Tsuda, Manager, Mitsui Bussan Kaisha, Ltd., Kobe, to Mr. I. Kodama, Osaka, dated the 25th February 1928.

With reference to your enquiry regarding an enquiry into Match Factories in Japan, I beg to enclose herein a Statement concerning the Match Industry in Japan, after having made possible investigations.

Further, for your reference, I have the pleasure to give you a short history as to how Swedish Match Co., have extended their capitalization upon Japanese Match Industry.

In 1924, they have purchased Nippon Match Co., Ltd. (amount of capital Yen 1,000,000—output 90,000 cases).

In 1925, they have associated with “Kockisha” (Mr. Inoue’s private enterprise, annual output 35,000 cases) alternating their organization into a limited company of Yen 800,000 (fully paid up), keeping half share each.

Again in the same year, they associated with “Kobayashi Match Manufacturer”—(Mr. Kobayashi’s private enterprise, annual output 15,000 cases) alternating into a limited company of Yen 750,000 (fully paid up) with half share.

In 1927, they have amalgamated the aforesaid three companies and Toyo Match Co., Ltd. (capital Yen 2,800,000—annual output 170,000 cases), and established a new “Daido Match Co., Ltd.,” with the capital of Yen 6,000,000 (fully paid up).

In 1927-28, they have established a new Firm “Asahi Match Co., Ltd.,” amount of capital Yen 1,000,000 (paid up) investing 90 per cent. of the total capital by purchasing Aboshi Match Co., Ltd. (capital Yen 50,000—output 20,000 cases), Isayama Match Factory (Mr. Isayama’s private enterprise, output 20,000 cases) and three other small factories.

As to the natural result of the above, they are now enjoying 80 per cent. of the total output of Japanese Match Industry and further they, for the purpose of securing whole control of Japanese Match Industry, are earnestly trying to approach the remaining factory-owners in Japan.

Match Manufacture in Japan.
Unit—case containing 600 doz.

Name of manufacturers.	Situating at	No. of factories.	Output per annum. Case.	Amount of capital. Yen.	Associated with Swedish Match Company.	
					Yes or No.	Amount of investment.
Daido Match Company, Limited	Kobe . . .	15	310,000	6,000,000 (Paid up) About 4,000,000 (Debtenture.)	Yes	About 3,000,000 (Capital) 4,000,000 (Debtenture) 900,000 (Capital).
Asahi Match Company, Limited	Hyogo Prefecture	11	85,000	1,000,000 (Paid up)	"	"
Funai Match Works	"	1	16,000	Unknown	No	"
Chosen Match Works	Korea	1	12,000	500,000 (200,000 Paid up)	"	"
Shidzuoka Match Works	Shidzuoka Prefecture	2	12,000	400,000 (280,000 Paid up)	"	"
Otani Match Works	Hyogo Prefecture	1	11,000	Unknown	"	"
Shoyei Match Works	Kobe . . .	1	10,000	"	"	"
Matsutani Match Works	Hyogo Prefecture	1	8,000	"	"	"
Takashima Match Works	"	1	5,000	"	"	"
Shimotsu Match Works	Kagawa Prefecture	1	5,000	"	"	"
Sanyo Match Works	Hiroshima Prefecture	1	5,000	"	"	"
Chugai Match Works	Okayama Prefecture	1	3,000	"	"	"
Kwansai Match Works	"	1	3,000	"	"	"
Iwasaki Match Works	Hyogo Prefecture	1	2,000	"	"	"
Takao Match Works	"	1	1,000	"	"	"
Takashima Match Works	Kobe . . .	1	1,000	"	"	"
Others . . .	Hyog o, Aichi, Tokyo Prefectures, etc.	30—40	11,000	"	"	"
Total .			500,000 cases.			



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